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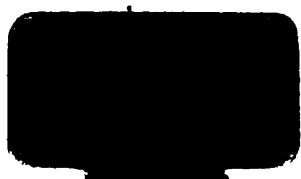
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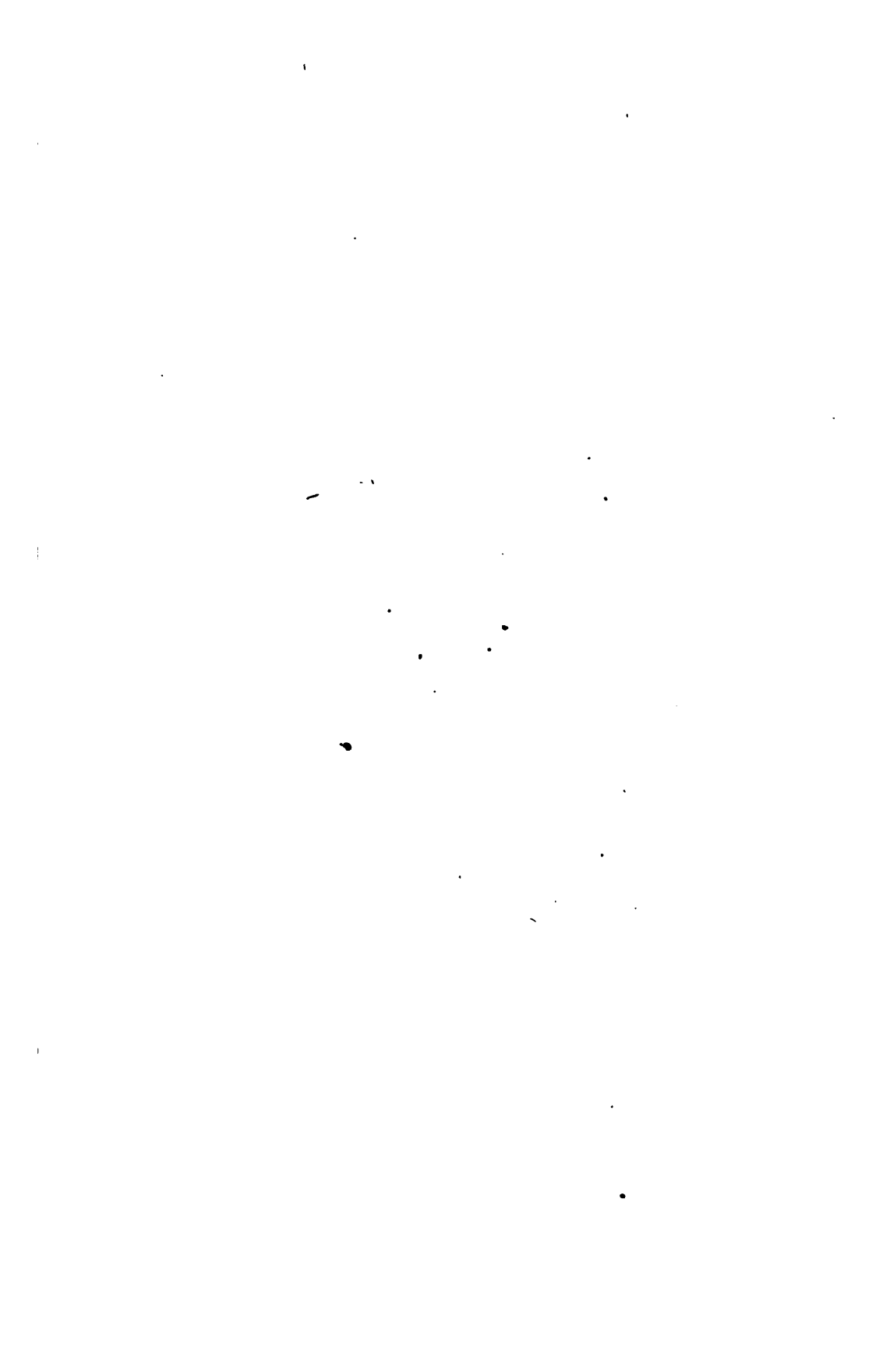
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**MESSAGE**

**FROM THE**

**PRESIDENT OF THE UNITED STATES**

**TO**

**THE TWO HOUSES OF CONGRESS**

**AT THE COMMENCEMENT OF THE**

**SECOND SESSION OF THE FORTY-SECOND CONGRESS.**

**WITH THE**

**REPORTS OF THE HEADS OF DEPARTMENTS**

**AND**

**SELECTIONS FROM ACCOMPANYING DOCUMENTS.**

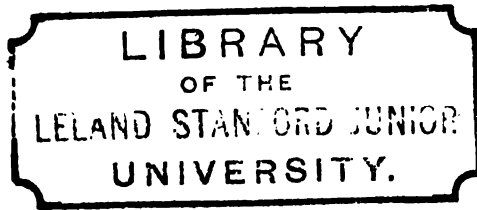
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**EDITED BY**

**BEN: PERLEY POORE,**  
**CLERK OF PRINTING RECORDS.**

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**WASHINGTON:**  
**GOVERNMENT PRINTING OFFICE.**  
**1872.**



A. 8072

Prepared in accordance with the following provisions of "An act to expedite and regulate the printing of public documents, and for other purposes," approved June 25, 1864 :

*Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled,* That hereafter, instead of furnishing manuscript copies of the documents usually accompanying their annual reports to each house of Congress, the heads of the several Departments of Government shall transmit them, on or before the first day of November in each year, to the Superintendent of Public Printing, who shall cause to be printed the usual number, and, in addition thereto, one thousand copies for the use of the Senate and two thousand copies for the use of the House of Representatives. And that it shall be the duty of the Joint Committee on Printing to appoint some competent person, who shall edit and select such portions of the documents so placed in their hands as shall, in the judgment of the committee, be desirable for popular distribution, and to prepare an alphabetical index to the same.

\* \* \* \* \*

SEC. 3. *And be it further enacted,* That it shall be the duty of the heads of the several Departments of Government to furnish the Superintendent of Public Printing with copies of their respective reports on or before the third Monday in November in each year.

SEC. 4. *And be it further enacted,* That it shall be the duty of the Superintendent of Public Printing to print the President's message, the reports of the heads of Departments, and the abridgment of accompanying documents prepared under the direction of the Joint Committee on Public Printing, suitably bound; and that, in addition to the number now required by law, and unless otherwise ordered by either House of Congress, it shall be his duty to print ten thousand copies of the same for the use of the Senate, and twenty-five thousand copies for the use of the House, and to deliver the same to the proper officer of each House, respectively, on or before the third Wednesday in December following the assembling of Congress, or as soon thereafter as practicable.

# MESSAGE

OF

## THE PRESIDENT OF THE UNITED STATES.

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*To the Senate and House of Representatives :*

In addressing my third annual message to the law-making branch of the Government, it is gratifying to be able to state that during the past year success has generally attended the effort to execute all laws found upon the statute-books. The policy has been, not to inquire into the wisdom of laws already enacted, but to learn their spirit and intent, and to enforce them accordingly.

The past year has, under a wise Providence, been one of general prosperity to the nation. It has, however, been attended with more than usual chastisements in the loss of life and property, by storm and fire. These disasters have served to call forth the best elements of human nature in our country, and to develop a friendship for us on the part of foreign nations which goes far toward alleviating the distresses occasioned by these calamities. The benevolent, who have so generously shared their means with the victims of these misfortunes, will reap their reward in the consciousness of having performed a noble act, and in receiving the grateful thanks of men, women, and children whose sufferings they have relieved.

The relations of the United States with foreign powers continue to be friendly. The year has been an eventful one in witnessing two great nations, speaking one language and having one lineage, settling, by peaceful arbitration, disputes of long standing, and liable at any time to bring those nations into bloody and costly conflict. An example has thus been set which, if successful in its final issue, may be followed by other civilized nations, and finally be the means of returning to productive industry millions of men now maintained to settle the disputes of nations by the bayonet and the broadside.

I transmit herewith a copy of the treaty alluded to, which has been concluded, since the adjournment of Congress, with Her Britannic Majesty, and a copy of the protocols of the conferences of the commissioners by whom it was negotiated. This treaty provides methods for adjusting the questions pending between the two nations.

Various questions are to be adjusted by arbitration. I recommend Congress at an early day to make the necessary provision for the tribunal at Geneva, and for the several commissioners, on the part of the United States, called for by the treaty.

His Majesty the King of Italy, the President of the Swiss Confederation, and His Majesty the Emperor of Brazil, have each consented, on the joint request of the two powers, to name an arbitrator for the tribu-

nal at Geneva. I have caused my thanks to be suitably expressed for the readiness with which the joint request has been complied with, by the appointment of gentlemen of eminence and learning to these important positions.

His Majesty the Emperor of Germany has been pleased to comply with the joint request of the two governments, and has consented to act as the arbitrator of the disputed water boundary between the United States and Great Britain.

The contracting parties in the treaty have undertaken to regard as between themselves certain principles of public law, for which the United States have contended from the commencement of their history. They have also agreed to bring those principles to the knowledge of the other maritime powers and to invite them to accede to them. Negotiations are going on as to the form of the note by which the invitation is to be extended to the other powers.

I recommend the legislation necessary on the part of the United States to bring into operation the articles of the treaty relating to the fisheries, and to the other matters touching the relations of the United States toward the British North American possessions, to become operative so soon as the proper legislation shall be had on the part of Great Britain and its possessions. It is much to be desired that this legislation may become operative before the fishermen of the United States begin to make their arrangements for the coming season.

I have addressed a communication, of which a copy is transmitted herewith, to the governors of New York, Pennsylvania, Ohio, Indiana, Michigan, Illinois, and Wisconsin, urging upon the governments of those States, respectively, the necessary action on their part to carry into effect the object of the article of the treaty which contemplates the use of the canals, on either side, connected with the navigation of the lakes and rivers forming the boundary, on terms of equality by the inhabitants of both countries. It is hoped that the importance of the object and the benefits to flow therefrom will secure the speedy approval and legislative sanction of the States concerned.

I renew the recommendation for an appropriation for determining the true position of the forty-ninth parallel of latitude where it forms the boundary between the United States and the British North American possessions, between the Lake of the Woods and the summit of the Rocky Mountains. The early action of Congress on this recommendation would put it in the power of the War Department to place a force in the field during the next summer.

The resumption of diplomatic relations between France and Germany have enabled me to give directions for the withdrawal of the protection extended to Germans in France by the diplomatic and consular representatives of the United States in that country. It is just to add that the delicate duty of this protection has been performed by the minister and the consul general at Paris, and the various consuls in France



under the supervision of the latter, with great kindness as well as with prudence and tact. Their course has received the commendation of the German government, and has wounded no susceptibility of the French.

The government of the Emperor of Germany continues to manifest a friendly feeling toward the United States, and a desire to harmonize with the moderate and just policy which this Government maintains in its relations with Asiatic powers, as well as with the South American republics. I have given assurances that the friendly feelings of that government are fully shared by the United States.

The ratifications of the consular and naturalization conventions with the Austro-Hungarian Empire have been exchanged.

I have been officially informed of the annexation of the States of the Church to the Kingdom of Italy, and the removal of the capital of that kingdom to Rome. In conformity with the established policy of the United States, I have recognized this change. The ratifications of the new treaty of commerce between the United States and Italy have been exchanged. The two powers have agreed in this treaty that private property at sea shall be exempt from capture in case of war between the two powers. The United States have spared no opportunity of incorporating this rule into the obligation of nations.

The Forty-first Congress at its third session made an appropriation for the organization of a mixed commission for adjudicating upon the claims of citizens of the United States against Spain growing out of the insurrection in Cuba. That commission has since been organized. I transmit herewith the correspondence relating to its formation and its jurisdiction. It is to be hoped that this commission will afford the claimants a complete remedy for their injuries.

It has been made the agreeable duty of the United States to preside over a conference at Washington between the plenipotentiaries of Spain and the allied South American republics, which has resulted in an armistice, with the reasonable assurance of a permanent peace.

The intimate friendly relations which have so long existed between the United States and Russia continue undisturbed. The visit of the third son of the Emperor is a proof that there is no desire on the part of his government to diminish the cordiality of those relations. The hospitable reception which has been given to the Grand Duke is a proof that on our side we share the wishes of that government. The inexorable course of the Russian minister at Washington rendered it necessary to ask his recall, and to decline to longer receive that functionary as a diplomatic representative. It was impossible with self-respect, or with a just regard to the dignity of the country, to permit Mr. Catacazy to continue to hold intercourse with this Government after his personal abuse of Government officials, and during his persistent interference, through various means, with the relations between the United States and other powers. In accordance with my wishes, this Government has been relieved of further intercourse with Mr. Catacazy,

and the management of the affairs of the imperial legation has passed into the hands of a gentleman entirely unobjectionable.

With Japan we continue to maintain intimate relations. The cabinet of the Mikado has, since the close of the last session of Congress, selected citizens of the United States to serve in offices of importance in several departments of government. I have reason to think that this selection is due to an appreciation of the disinterestedness of the policy which the United States have pursued toward Japan. It is our desire to continue to maintain this disinterested and just policy with China as well as Japan. The correspondence transmitted herewith shows that there is no disposition on the part of this Government to swerve from its established course.

Prompted by a desire to put an end to the barbarous treatment of our shipwrecked sailors on the Corean coast, I instructed our minister at Peking to endeavor to conclude a convention with Corea for securing the safety and humane treatment of such mariners.

Admiral Rodgers was instructed to accompany him, with a sufficient force to protect him in case of need.

A small surveying party sent out, on reaching the coast, was treacherously attacked at a disadvantage. Ample opportunity was given for explanation and apology for the insult. Neither came. A force was then landed. After an arduous march over a rugged and difficult country, the forts from which the outrages had been committed were reduced by a gallant assault and were destroyed. Having thus punished the criminals, and having vindicated the honor of the flag, the expedition returned, finding it impracticable, under the circumstances, to conclude the desired convention. I respectfully refer to the correspondence relating thereto, herewith submitted, and leave the subject for such action as Congress may see fit to take.

The republic of Mexico has not yet repealed the very objectionable laws establishing what is known as the "Free Zone," on the frontier of the United States. It is hoped that this may yet be done, and also that more stringent measures may be taken by that republic for restraining lawless persons on its frontiers. I hope that Mexico, by its own action, will soon relieve this Government of the difficulties experienced from these causes. Our relations with the various republics of Central and South America continue, with one exception, to be cordial and friendly.

I recommend some action by Congress regarding the overdue installments under the award of the Venezuelan claims commission of 1866. The internal dissensions of this government present no justification for the absence of effort to meet their solemn treaty obligations.

The ratification of an extradition treaty with Nicaragua has been exchanged.

It is a subject for congratulation that the great empire of Brazil has taken the initiatory step toward the abolition of slavery. Our relations

with that empire, always cordial, will naturally be made more so by this act. It is not too much to hope that the government of Brazil may hereafter find it for its interest as well as intrinsically right to advance toward entire emancipation more rapidly than the present act contemplates.

The true prosperity and greatness of a nation is to be found in the elevation and education of its laborers.

It is a subject for regret that the reforms in this direction, which were voluntarily promised by the statesmen of Spain, have not been carried out in its West India colonies. The laws and regulations for the apparent abolition of slavery in Cuba and Porto Rico leave most of the laborers in bondage, with no hope of release until their lives become a burden to their employers.

I desire to direct your attention to the fact that citizens of the United States, or persons claiming to be citizens of the United States, are large holders, in foreign lands, of this species of property, forbidden by the fundamental law of their alleged country. I recommend to Congress to provide, by stringent legislation, a suitable remedy against the holding, owning, or dealing in slaves, or being interested in slave property in foreign lands, either as owners, hirers, or mortgagers, by citizens of the United States.

It is to be regretted that the disturbed condition of the island of Cuba continues to be a source of annoyance and of anxiety. The existence of a protracted struggle in such close proximity to our own territory, without apparent prospect of an early termination, cannot be other than an object of concern to a people who, while abstaining from interference in the affairs of other powers, naturally desire to see every country in the undisturbed enjoyment of peace, liberty, and the blessings of free institutions.

Our naval commanders in Cuban waters have been instructed, in case it should become necessary, to spare no effort to protect the lives and property of *bona-fide* American citizens, and to maintain the dignity of the flag.

It is hoped that all pending questions with Spain growing out of the affairs in Cuba may be adjusted in the spirit of peace and conciliation which has hitherto guided the two powers in their treatment of such questions.

To give importance, and to add to the efficiency of our diplomatic relations with Japan and China, and to further aid in retaining the good opinion of those peoples, and to secure to the United States its share of the commerce destined to flow between those nations and the balance of the commercial world, I earnestly recommend that an appropriation be made to support at least four American youths in each of those countries, to serve as a part of the official family of our ministers there. Our representatives would not even then be placed upon an equality with the representatives of Great Britain and of some other

powers. As now situated, our representatives in Japan and China have to depend, for interpreters and translators, upon natives of those countries who know our language imperfectly, or procure for the occasion the services of employés in foreign business houses, or the interpreters to other foreign ministers.

I would also recommend liberal measures for the purpose of supporting the American lines of steamers now plying between San Francisco and Japan and China, and the Australian line—almost our only remaining lines of ocean steamers—and of increasing their services.

The national debt has been reduced to the extent of eighty-six million fifty-seven thousand one hundred and twenty-six dollars and eighty cents during the year, and by the negotiation of national bonds at a lower rate of interest, the interest on the public debt has been so far diminished that now the sum to be raised for the interest account is nearly seventeen million dollars less than on the 1st of March, 1869. It was highly desirable that this rapid diminution should take place, both to strengthen the credit of the country, and to convince its citizens of their entire ability to meet every dollar of liability without bankrupting them. But in view of the accomplishment of these desirable ends; of the rapid development of the resources of the country; its increasing ability to meet large demands, and the amount already paid, it is not desirable that the present resources of the country should continue to be taxed in order to continue this rapid payment. I therefore recommend a modification of both the tariff and internal tax laws. I recommend that all taxes from internal sources be abolished, except those collected from spirituous, vinous, and malt liquors, tobacco in its various forms, and from stamps.

In re-adjusting the tariff, I suggest that a careful estimate be made of the amount of surplus revenue collected under the present laws, after providing for the current expenses of the Government, the interest account, and a sinking fund, and that this surplus be reduced in such a manner as to afford the greatest relief to the greatest number. There are many articles not produced at home, but which enter largely into general consumption through articles which are manufactured at home, such as medicines compounded, &c., &c., from which very little revenue is derived, but which enter into general use. All such articles I recommend to be placed on the "free list." Should a further reduction prove advisable, I would then recommend that it be made upon those articles which can best bear it without disturbing home-production, or reducing the wages of American labor.

I have not entered into figures, because to do so would be to repeat what will be laid before you in the report of the Secretary of the Treasury. The present laws for collecting revenue pay collectors of customs small salaries, but provide for moieties (shares in all seizures) which, at principal ports of entry particularly, raise the compensation of those officials to a large sum. It has always seemed to me as if this system

must, at times, work perniciously. It holds out an inducement to dishonest men, should such get possession of those offices, to be lax in their scrutiny of goods entered to enable them finally to make large seizures. Your attention is respectfully invited to this subject.

Continued fluctuations in the value of gold, as compared with the national currency, has a most damaging effect upon the increase and development of the country in keeping up prices of all articles necessary in every-day life. It fosters a spirit of gambling prejudicial alike to national morals and the national finances. If the question can be met, as to how to give a fixed value to our currency, that value constantly and uniformly approaching par with specie, a very desirable object will be gained.

For the operations of the Army in the past year, the expense of maintaining it, the estimate for the ensuing year, and for continuing sea-coast and other improvements conducted under the supervision of the War Department, I refer you to the accompanying report of the Secretary of War.

I call your attention to the provisions of the act of Congress approved March 3, 1869, which discontinues promotions in the staff corps of the Army until provided for by law. I recommend that the number of officers in each grade in the staff corps be fixed, and that whenever the number in any one grade falls below the number so fixed, that the vacancy may be filled by promotion from the grade below. I also recommend that, when the office of chief of a corps becomes vacant, the place may be filled by selection from the corps in which the vacancy exists.

The report of the Secretary of the Navy shows an improvement in the number and efficiency of the naval force, without material increase in the expense of supporting it. This is due to the policy which has been adopted, and is being extended, as fast as our material will admit, of using smaller vessels as cruisers on the several stations. By this means we have been enabled to occupy at once a larger extent of cruising-ground, to visit more frequently the ports where the presence of our flag is desirable, and generally to discharge more efficiently the appropriate duties of the Navy in time of peace, without exceeding the number of men or the expenditure authorized by law.

During the past year the Navy has, in addition to its regular service, supplied the men and officers for the vessels of the Coast Survey, and has completed the surveys authorized by Congress of the Isthmus of Darien and Tehuantepec, and under like authority has sent out an expedition completely furnished and equipped to explore the unknown ocean of the north.

The suggestions of the report as to the necessity for increasing and improving the *matériel* of the Navy, and the plan recommended for reducing the *personnel* of the service to a peace standard, by the gradual abolition of certain grades of officers, the reduction of others,

and the employment of some in the service of the commercial marine, are well considered and deserve the thoughtful attention of Congress.

I also recommend that all promotions in the Navy above the rank of captain be by selection instead of by seniority. This course will secure in the higher grades greater efficiency and hold out an incentive to young officers to improve themselves in the knowledge of their profession.

The present cost of maintaining the Navy, its cost compared with that of the preceding year, and the estimates for the ensuing year, are contained in the accompanying report of the Secretary of the Navy.

The enlarged receipts of the Post-Office Department, as shown by the accompanying report of the Postmaster General, exhibits a gratifying increase in that branch of the public service. It is the index of the growth of education and of the prosperity of the people, two elements highly conducive to the vigor and stability of republics. With a vast territory like ours, much of it sparsely populated, but all requiring the services of the mail, it is not at present to be expected that this Department can be made self-sustaining. But a gradual approach to this end, from year to year, is confidently relied on, and the day is not far distant when the Post-Office Department of the Government will prove a much greater blessing to the whole people than it is now.

The suggestions of the Postmaster General for improvements in the Department presided over by him are earnestly recommended to your special attention. Especially do I recommend favorable consideration of the plan for uniting the telegraphic system of the United States with the postal system. It is believed that by such a course the cost of telegraphing could be much reduced, and the service as well, if not better, rendered. It would secure the further advantage of extending the telegraph through portions of the country where private enterprise will not construct it. Commerce, trade, and, above all, the efforts to bring a people widely separated into a community of interest, are always benefited by a rapid intercommunication. Education, the ground-work of republican institutions, is encouraged by increasing the facilities to gather speedy news from all parts of the country. The desire to reap the benefit of such improvements will stimulate education. I refer you to the report of the Postmaster-General for full details of the operations of last year, and for comparative statements of results with former years.

There has been imposed upon the Executive branch of the Government the execution of the act of Congress approved April 20, 1871, and commonly known as the Ku-Klux law, in a portion of the State of South Carolina. The necessity of the course pursued will be demonstrated by the report of the Committee to Investigate Southern Outrages. Under the provisions of the above act, I issued a proclamation calling the attention of the people of the United States to the same, and declaring my reluctance to exercise any of the extraordinary powers thereby con-

ferred upon me, except in case of imperative necessity, but making known my purpose to exercise such powers whenever it should become necessary to do so for the purpose of securing to all citizens of the United States the peaceful enjoyment of the rights guaranteed to them by the Constitution and the laws.

After the passage of this law, information was received from time to time that combinations of the character referred to in this law existed, and were powerful in many parts of the Southern States, particularly in certain counties in the State of South Carolina.

Careful investigation was made, and it was ascertained that, in nine counties of that State, such combinations were active and powerful, embracing a sufficient portion of the citizens to control the local authority, and having, among other things, the object of depriving the emancipated class of the substantial benefits of freedom, and of preventing the free political action of those citizens who did not sympathize with their own views. Among their operations were frequent scourgings and occasional assassinations, generally perpetrated at night by disguised persons, the victims in almost all cases being citizens of different political sentiments from their own, or freed persons who had shown a disposition to claim equal rights with other citizens. Thousands of inoffensive and well-disposed citizens were the sufferers by this lawless violence.

Thereupon, on the 12th of October, 1871, a proclamation was issued, in terms of the law, calling upon the members of those combinations to disperse within five days, and to deliver to the marshal or military officers of the United States all arms, ammunition, uniforms, disguises, and other means and implements used by them for carrying out their unlawful purposes.

This warning not having been heeded, on the 17th of October another proclamation was issued, suspending the privileges of the writ of *habeas corpus* in nine counties in that State.

Direction was given that, within the counties so designated, persons supposed, upon creditable information, to be members of such unlawful combinations should be arrested by the military forces of the United States, and delivered to the marshal, to be dealt with according to law. In two of said counties, York and Spartanburgh, many arrests have been made. At the last account, the number of persons thus arrested was one hundred and sixty-eight. Several hundred, whose criminality was ascertained to be of an inferior degree, were released for the present. These have generally made confessions of their guilt.

Great caution has been exercised in making these arrests, and, notwithstanding the large number, it is believed that no innocent person is now in custody. The prisoners will be held for regular trial in the judicial tribunals of the United States.

As soon as it appeared that the authorities of the United States were about to take vigorous measures to enforce the law, many persons absconded, and there is good ground for supposing that all of such ---

sons have violated the law. A full report of what has been done under this law will be submitted to Congress by the Attorney General.

In Utah there still remains a remnant of barbarism, repugnant to civilization, to decency, and to the laws of the United States. Territorial officers, however, have been found who are willing to perform their duty in a spirit of equity and with a due sense of the necessity of sustaining the majesty of the law. Neither polygamy nor any other violation of existing statutes will be permitted within the territory of the United States. It is not with the religion of the self-styled Saints that we are now dealing, but with their practices. They will be protected in the worship of God according to the dictates of their consciences, but they will not be permitted to violate the laws under the cloak of religion.

It may be advisable for Congress to consider what, in the execution of the laws against polygamy, is to be the status of plural wives and their offspring. The propriety of Congress passing an enabling act authorizing the territorial legislature of Utah to legitimize all children born prior to a time fixed in the act might be justified by its humanity to these innocent children. This is a suggestion only, and not a recommendation.

The policy pursued toward the Indians has resulted favorably, so far as can be judged from the limited time during which it has been in operation. Through the exertions of the various societies of Christians to whom has been intrusted the execution of the policy, and the board of commissioners authorized by the law of April 10, 1869, many tribes of Indians have been induced to settle upon reservations, to cultivate the soil, to perform productive labor of various kinds, and to partially accept civilization. They are being cared for in such a way, it is hoped, as to induce those still pursuing their old habits of life to embrace the only opportunity which is left them to avoid extermination.

I recommend liberal appropriations to carry out the Indian peace policy, not only because it is humane, Christian-like, and economical, but because it is right.

I recommend to your favorable consideration also the policy of granting a territorial government to the Indians in the Indian Territory west of Arkansas and Missouri and south of Kansas. In doing so, every right guaranteed to the Indian by treaty should be secured. Such a course might in time be the means of collecting most of the Indians now between the Missouri and the Pacific and south of the British possessions into one Territory or one State. The Secretary of the Interior has treated upon this subject at length, and I commend to you his suggestions.

I renew my recommendation that the public lands be regarded as a heritage to our children, to be disposed of only as required for occupation and to actual settlers. Those already granted have been in great part disposed of in such a way as to secure access to the balance by the



hardy settler who may wish to avail himself of them, but caution should be exercised even in attaining so desirable an object.

Educational interest may well be served by the grant of the proceeds of the sale of public lands to settlers. I do not wish to be understood as recommending, in the least degree, a curtailment of what is being done by the General Government for the encouragement of education.

The report of the Secretary of the Interior, submitted with this, will give you all the information collected and prepared for publication in regard to the census taken during the year 1870; the operations of the Bureau of Education for the year; the Patent Office; the Pension Office; the Land Office; and the Indian Bureau.

The report of the Commissioner of Agriculture gives the operations of his Department for the year. As agriculture is the ground-work of our prosperity, too much importance cannot be attached to the labors of this Department. It is in the hands of an able head, with able assistants, all zealously devoted to introduce into the agricultural productions of the nation all useful products adapted to any of the various climates and soils of our vast territory, and to giving all useful information as to the method of cultivation, the plants, cereals, and other products adapted to particular localities. Quietly, but surely, the Agricultural Bureau is working a great national good, and if liberally supported, the more widely its influence will be extended and the less dependent we shall be upon the products of foreign countries.

The subject of compensation to the heads of Bureaus and officials holding positions of responsibility, and requiring ability and character to fill properly, is one to which your attention is invited. But few of the officials receive a compensation equal to the respectable support of a family, while their duties are such as to involve millions of interest. In private life services demand compensation equal to the services rendered. A wise economy would dictate the same rule in the Government service.

I have not given the estimates for the support of Government for the ensuing year, nor the comparative statement between the expenditures for the year just passed and the one just preceding, because all these figures are contained in the accompanying reports, or in those presented directly to Congress. These estimates have my approval.

More than six years having elapsed since the last hostile gun was fired between the armies then arrayed against each other—one for the perpetuation, the other for the destruction of the Union—it may well be considered whether it is not now time that the disabilities imposed by the fourteenth amendment should be removed. That amendment does not exclude the ballot, but only imposes the disability to hold offices upon certain classes. When the purity of the ballot is secure, majorities are sure to elect officers reflecting the views of the majority. I do not see the advantage or propriety of excluding men from office merely because they were, before the rebellion, of standing and character sufficient to be elected to positions requiring them to take oaths to support the Con-

stitution, and admitting to eligibility those entertaining precisely the same views, but of less standing in their communities. It may be said that the former violated an oath, while the latter did not. The latter did not have it in their power to do so. If they had taken this oath it cannot be doubted they would have broken it as did the former class. If there are any great criminals, distinguished above all others for the part they took in opposition to the Government, they might, in the judgment of Congress, be excluded from such an amnesty.

This subject is submitted for your careful consideration.

The condition of the Southern States is, unhappily, not such as all true patriotic citizens would like to see. Social ostracism for opinion's sake, personal violence or threats toward persons entertaining political views opposed to those entertained by the majority of the old citizens, prevents immigration and the flow of much-needed capital into the States lately in rebellion. It will be a happy condition of the country when the old citizens of these States will take an interest in public affairs, promulgate ideas honestly entertained, vote for men representing their views, and tolerate the same freedom of expression and ballot in those entertaining different political convictions.

Under the provisions of the act of Congress approved February 21, 1871, a territorial government was organized in the District of Columbia. Its results have thus far fully realized the expectations of its advocates. Under the direction of the territorial officers, a system of improvements has been inaugurated, by means of which Washington is rapidly becoming a city worthy of the nation's capital. The citizens of the District having voluntarily taxed themselves to a large amount for the purpose of contributing to the adornment of the seat of Government, I recommend liberal appropriations on the part of Congress in order that the Government may bear its just share of the expense of carrying out a judicious system of improvements.

By the great fire in Chicago, the most important of the Government buildings in that city were consumed. Those burned had already become inadequate to the wants of the Government in that growing city, and, looking to the near future, were totally inadequate. I recommend therefore that an appropriation be made immediately to purchase the remainder of the square on which the burned buildings stood, provided it can be purchased at a fair valuation, or provided that the legislature of Illinois will pass a law authorizing its condemnation for Government purposes; and also an appropriation of as much money as can properly be expended toward the erection of new buildings during this fiscal year.

The number of immigrants ignorant of our laws, habits, &c., coming into our country annually has become so great, and the impositions practiced upon them so numerous and flagrant, that I suggest congressional action for their protection. It seems to me a fair subject of legislation by Congress. I cannot now state as fully as I desire the nature of the complaints made by immigrants of the treatment they

receive, but will endeavor to do so during the session of Congress, particularly if the subject should receive your attention.

It has been the aim of the Administration to enforce honesty and efficiency in all public offices. Every public servant who has violated the trust placed in him has been proceeded against with all the rigor of the law. If bad men have secured places it has been the fault of the system established by law and custom for making appointments, or the fault of those who recommend for Government positions persons not sufficiently well known to them personally, or who give letters indorsing the characters of office-seekers without a proper sense of the grave responsibility which such a course devolves upon them. A civil service reform which can correct this abuse is much desired. In mercantile pursuit, the business-man who gives a letter of recommendation to a friend, to enable him to obtain credit from a stranger, is regarded as morally responsible for the integrity of his friend, and his ability to meet his obligations. A reformatory law which would enforce this principle against all indorsers of persons for public place would insure great caution in making recommendations. A salutary lesson has been taught the careless and the dishonest public servant in the great number of prosecutions and convictions of the last two years.

It is gratifying to notice the favorable change which is taking place throughout the country in bringing to punishment those who have proven recreant to the trusts confided to them, and in elevating to public office none but those who possess the confidence of the honest and the virtuous, who, it will always be found, comprise the majority of the community in which they live.

In my message to Congress one year ago, I urgently recommended a reform in the civil service of the country. In conformity with that recommendation, Congress, in the ninth section of "An act making appropriations for sundry civil expenses of the Government, and for other purposes," approved March 3, 1871, gave the necessary authority to the Executive to inaugurate a civil service reform, and placed upon him the responsibility of doing so. Under the authority of said act I convened a board of gentlemen, eminently qualified for the work, to devise rules and regulations to effect the needed reform. Their labors are not yet complete, but it is believed that they will succeed in devising a plan that can be adopted to the great relief of the Executive, the heads of Departments, and members of Congress, and which will redound to the true interest of the public service. At all events, the experiment shall have a fair trial.

I have thus hastily summed up the operations of the Government during the last year, and made such suggestions as occur to me to be proper for your consideration. I submit them with a confidence that your combined action will be wise, statesmanlike, and in the best interests of the whole country.

U. S. GRANT.

EXECUTIVE MANSION, December 4, 1871.

# REPORT

## OF THE

### SECRETARY OF THE TREASURY.

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TREASURY DEPARTMENT,

*December 4, 1871.*

SIR: The country has been prosperous during the year now closing, and the public finances have shared in the general prosperity.

During the fiscal year ending June 30, 1871, the reduction of the public debt was \$94,327,764 84. The total decrease in the public debt from March 1, 1869, to December 1, 1871, was \$277,211,892 16; and during the same period the annual interest charge has been reduced \$16,741,436 04.

The revenues for the year 1871, and the receipts since the first of July last, show that the time has arrived when a considerable further reduction in taxes can be made, and yet leave the Government in a position to pay at least fifty millions of dollars annually of the principal of the public debt, including the amount pledged through the sinking fund. In my annual report to Congress for 1870, I expressed the opinion that the settled policy of the country should contemplate a revenue sufficient to meet the ordinary expenses of the Government, pay the interest on the public debt, and from twenty-five to fifty millions of dollars of the principal annually. To that opinion I adhere, with even a stronger conviction that the payment annually upon the principal of the public debt should not be less than fifty millions of dollars.

Large as the revenues of the country have been during the last three years, our system of taxation has not been oppressive to individuals, nor has it in any sensible degree embarrassed the business of the country; and while relief from taxation is desirable it is yet more desirable to maintain the public credit in its present elevated position, not only as an example to other nations, but for its historical value, in enabling the Government to make loans for large amounts

upon favorable terms if, unhappily, in the future an exigency should require such loans to be made.

The power to negotiate a large loan at five per cent. interest, and to enter upon negotiations for the sale of bonds bearing five, four-and-a-half, and four per cent. interest, is derived entirely from the exhibition of an honest purpose on the part of the people to maintain the public faith, and the consequent ability on the part of the Government to answer that expectation by large and frequent payments upon the public debt.

The revenue from customs for the fiscal year 1871 was greatly in excess of the estimates, amounting to \$206,270,408 05, against \$194,538,374 44, for the preceding year. The cost of collecting this revenue was \$6,560,672 61, for 1871, being three and eleven hundredths per cent., while the cost for the year 1870 was \$6,237,137 25, or three and twenty hundredths per cent.

The appropriation for the collection of the customs, with the additions derived from fines, penalties, and forfeitures, exceeded the expenditures by the sum of more than eight hundred thousand dollars, and there is no doubt that the permanent appropriation will be ample for the present year, and for the next fiscal year.

The reduction of the rates of duty on the 1st of January, 1871, under the act of July 14, 1870, diminished the importation of many articles during the last six months of the year 1870, but there was consequently a large addition to the revenues for the first six months of the year 1871.

A comparison of the first six months of the calendar year 1871 with the first six months of the calendar year 1870, shows an increase of fifty-five per cent. in the quantity of tea imported, twenty per cent. in the quantity of coffee, fifty-three per cent. in the quantity of brown sugar, one hundred and twenty per cent. in the quantity of pig iron, one hundred and eighty-six per cent. in the quantity of melado, one hundred and thirty-nine per cent. in the quantity of spices, and a large increase in many other articles.

The probability is that the customs revenue for the current year will exceed that for the year 1870-'71.

The receipts from internal revenue were \$143,098,153 63, being \$1,048,984 29 less than the estimates presented to Congress in December last for the fiscal year ending June 30, 1871. The estimates for the current fiscal year were \$126,418,000, and it is probable that the receipts will be equal to the estimates.

The net receipts for the fiscal year ending June 30, 1871, were as follows:

From customs.....	\$206, 270, 408 05
From internal revenue.....	143, 098, 153 63
From sales of public lands.....	2, 388, 646 68
From miscellaneous sources.....	31, 566, 736 53
	<hr/>
	383, 323, 944 89
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The expenditures for the same period were:

For civil and miscellaneous purposes.....	\$69, 498, 710 97
For War Department.....	*35, 799, 991 82
For Navy Department.....	19, 431, 027 21
For Indians.....	7, 426, 997 44
For Pensions.....	34, 443, 894 88
For interest on the public debt.....	125, 576, 565 93
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	292, 177, 188 25
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The miscellaneous revenues for the fiscal year ending June 30, 1871, were derived from the following sources:

Premium on sales of coin.....	\$8, 892, 839 95
Fees from United States consuls.....	565, 563 24
Storage, rent, labor, &c., at custom-houses.....	414, 310 61
Fines, penalties, and forfeitures for violations of customs laws.....	952, 579 86
Fees on letters patent.....	620, 319 11
Tax on circulation, deposits, &c., of national banks..	6, 003, 584 32
Repayment of interest by Pacific railway companies.	813, 284 75
Homestead and other land fees.....	645, 923 17
Steamboat fees and marine-hospital tax.....	385, 535 16
Proceeds of sale of coin-interest on sinking and special funds.....	7, 701, 662 73
Judiciary—fines, penalties, and forfeitures.....	75, 836 30
Tax on seal-skins.....	101, 080 00
Reimbursement to the United States for salaries of storekeepers in internal revenue bonded warehouses.	557, 235 41
Direct tax.....	580, 355 37
Emolument fees.....	585, 687 69
Parting charges—refining gold and silver bullion....	211, 721 14
Proceeds of Indian trust lands.....	1, 140, 120 28

\* This is the net amount after deducting \$6,280,063 13 repaid into the Treasury as proceeds of sales of ordnance, etc. The true expenditures were \$44,080,064 94.

Accrued interest on, and proceeds of sale of, Indian trust-fund stocks, and interest on deferred payments on Indian-trust lands.....	\$387,921 01
Reimbursements to the United States for moneys advanced to meet matured interest on non-paying stocks held in trust for various Indian tribes.....	35,535 00
One, two, three, and five-cent coinage.....	150,000 00
Unenumerated .....	745,441 43
	<hr/>
	31,566,736 53
	<hr/>

The receipts for the first quarter of the present fiscal year were:

From customs.....	\$62,289,329 37
From internal revenue.....	35,553,175 01
From sales of public lands.....	602,680 61
From miscellaneous sources.....	8,753,189 61
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	107,198,374 60
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The expenditures for the same period, excluding payments on account of the sinking fund, were:

For civil and miscellaneous purposes.....	\$16,579,732 46
For War Department.....	12,590,653 05
For Navy Department.....	6,513,040 93
For Indians.....	3,404,133 42
For Pensions.....	8,090,698 69
For interest on the public debt.....	36,725,124 37
	<hr/>
	83,903,382 92
	<hr/>

The estimated receipts for the remaining three quarters of the present year, are as follows:

From customs.....	\$148,000,000 00
From internal revenue.....	90,000,000 00
From sales of public lands.....	2,000,000 00
From miscellaneous sources.....	18,000,000 00
	<hr/>
	258,000,000 00
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The estimated expenditures for the same period, excluding payments on account of the sinking fund, are:

For civil and miscellaneous purposes.....	\$50,000,000 00
For War Department.....	31,000,000 00

For Navy Department.....	\$13,500,000 00
For Indians.....	6,000,000 00
For Pensions .....	24,000,000 00
For interest on the public debt.....	85,000,000 00
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	209,500,000 00
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These estimates show a balance applicable to the payment of the principal of the public debt for the fiscal year ending June 30, 1872, \$71,794,991 68.

The receipts and expenditures for the fiscal year ending June 30, 1873, are estimated as follows:

## RECEIPTS.

From customs.....	\$212,000,000
From internal revenue.....	126,000,000
From sales of public lands.....	3,000,000
From miscellaneous sources.....	18,000,000
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	359,000,000
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## EXPENDITURES.

Legislative establishment .....	\$3,421,812 40
Executive establishment.....	17,443,531 38
Judicial establishment.....	3,383,350 00
Military establishment.....	31,422,509 88
Naval establishment.....	18,946,088 95
Indian affairs .....	5,445,617 97
Pensions .....	30,480,000 00
Public works under Treasury Dep't ..	\$3,104,500 00
Public works under Interior Dep't ...	244,800 00
Public works under War Dep't .....	14,609,662 97
Public works under Navy Dept't ....	1,483,100 00
Public works under Agricultural Dep't,	26,500 00
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	19,468,562 97
Postal service.....	5,474,001 00
Miscellaneous .....	11,258,325 44
Permanent appropriations .....	126,281,974 06
Sinking fund.....	22,895,930 00
Interest upon the capital of the sinking fund.....	5,783,333 00
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	301,705,036 99
	<hr/>



These estimates show a balance of \$57,294,963 01 applicable to the payment of the principal of the debt, in addition to the sum of \$28,679,263 due on account of the sinking fund, or the sum of \$85,974,226 01 in all.

In the estimates for the next fiscal year I have not included in the receipts the premium on gold which may be sold, nor in the expenditures the premium which may be paid on bonds to be purchased in currency.

In the suggestions I have the honor to make in reference to the reduction of taxes, I keep in view two important facts: first, that the ability of the nation to pay at least fifty millions annually of the principal of the public debt shall not be impaired; and, secondly, that in the change of the revenue system no violence shall be done to the business interests of the country. While I do not undertake to state precisely the causes which have contributed to the public prosperity, there is no substantial reason for questioning the truth of the statement that the last few years have been the most prosperous in the history of the country; years without example in our own affairs, and without parallel in the affairs of any other Government.

It is practicable to dispense with all revenue from internal sources except that derived from stamps, spirits, tobacco, and malt liquors. These sources should furnish for the year 1872-73 a revenue of about one hundred and ten millions of dollars, making a reduction of taxes of sixteen millions of dollars. The revenue from customs under existing laws, and from lands and miscellaneous sources, would amount to about two hundred and thirty-three millions more, making a total revenue for that year of three hundred and forty-three millions of dollars.

The expenses of the Government, not including the amount payable on account of the sinking fund, are estimated at \$273,025,773 99.

If to this sum be added fifty millions of dollars for payments on account of the public debt, including the amount due on the sinking fund, there remains a balance of about twenty millions, within which reductions may be made in the revenue from customs. This amount, added to the reductions proposed under the internal revenue laws, gives a total reduction of thirty-six millions.

In this view, I respectfully recommend to the consideration of Congress the reduction of the duties on salt to the extent of fifty per cent.; the duty on bituminous coal to fifty cents per ton; the reduction of the duty on raw hides and skins; and the removal of all duties from a large class of articles produced in other countries, which enter into the arts and manufactures of this country, and which are

not produced in the United States, and the revenue from which is inconsiderable. Such a list, with the revenue derived from each article, is in course of preparation, and will be submitted to Congress.

The removal of duties from a large class of articles used in manufactures, and the reduction of the duties upon coal, furnish an opportunity for a moderate decrease in the rates of duties upon those products whose cost will be diminished by these changes.

While nothing, as the consequence of legislation, could be more disastrous to the public prosperity than a policy which should destroy or seriously disturb the manufacturing interest of the country, it is still possible, by wise and moderate changes adapted to the condition of business and labor, to reduce the rates of duties with benefit to every class of people.

The average premium on gold for the year 1868 was 39.54 per cent.; for the year 1869 it was 32.56 per cent. premium; for the year 1870 it was 14.83 per cent. premium; and for the first eleven months of the year 1871 it was 12.1 per cent. premium. The value of the paper currency of the country during the years 1869 and 1870 was apparently appreciated by the increased use of paper money in the South, but chiefly by the establishment of the credit of the United States upon a firm basis. On the first of January, 1871, the last-named fact was fully accomplished, and since that time the appreciation of the paper currency has been due wholly to the increased demand for it in the business affairs of the country. The difference between the value of paper money at the present moment and its value on the first of December, 1870, may be attributed to the latter cause, and furnishes the best means which the country has yet had for ascertaining the quantity of paper currency which can be used and its value kept at par with gold.

The result of this test concurs with what seems to me to be the best opinion upon the subject, that the amount of paper money in circulation is still so great that it cannot be maintained in value at par with coin. There are two modes of relief: One is to reduce the volume of currency, as was recommended by me in my annual report submitted to Congress in December, 1869; the other mode is to await the growth of the country, and the increasing demands of business, which in time will produce the desired result.

The chief means of securing the end sought, without a reduction in the volume of currency, would be the use of paper money upon the Pacific coast. With this object in view, steps have already been taken by this Department for the purpose of ascertaining whether it is practicable to substitute paper for coin, and I have reason to anticipate that a change

may be made in the laws relating to National Banks tending to that result, which will not affect unfavorably the general character of the system.

It is my duty to call the attention of Congress to the importance of abolishing the system of shares in moieties, as far as the benefits inure to revenue officers, and other persons officially connected with the Government. This measure was recommended in my last annual report, and a statement was submitted to Congress showing the amount received by officers of customs, together with a bill increasing their salaries without any increase of appropriations from the Treasury; the sum now paid from moieties being quite sufficient to place the entire force upon a satisfactory footing in regard to pay.

During the last fiscal year the office of collector and surveyor of the port of New York each received from moieties the sum of \$49,215 69, and the naval office the sum of \$48,195 59.

In most of the cases the officers do not perform special services entitling them to the amounts granted, and importers and others whose acts are made the subject of investigation, complain, and, I think, with just reason, that the agents of the Government have a pecuniary interest in pursuing those charged with violations of the law. The Government ought to pay fair salaries, and rely upon the good faith of its officers for the performance of their duty. One of the difficulties which the Department has to meet, frequently is, that customs officers have an interest in proceedings for the discovery of fraud, the settlement of cases, or the prosecution of them, which is different from the real interest of the Government; and, as a necessary result, the conduct of such officers is open to suspicion, both on the part of those who are pursued by them, and the Government that they ostensibly represent.

It may be deemed expedient to leave the law as it now stands in regard to informers who are not officers, making it a penal offense for any officer to enter into an arrangement with an informer for any share of the proceeds of the information, and giving to the informer perpetual right of action for the recovery of any money or other valuable thing paid or given to an officer engaged in the discovery or prosecution of a fraud or legal wrong against the Government.

The report of the Comptroller of the Currency shows that one hundred and forty-five banks have been organized under the act approved July 12, 1871, providing for the issue of fifty-four millions of dollars of additional bank circulation, and that the sum of \$22,333,900 has been issued.

By virtue of the same act, the Treasury has redeemed \$22,230,000

of the three per cent. certificates then in circulation, leaving the sum of \$23,490,000 now outstanding. I take the liberty of suggesting, that it appears to me to be wise to leave the distribution of the circulation authorized by said act as it now stands.

Should the States that have already received their proportion of circulation be authorized to take what may remain, only a brief period will elapse before a demand will be made from States with limited circulation for an increase. It seems prudent, therefore, to retain the balance of the fifty-four millions for distribution in those States now having a claim to it, on the basis of equality of apportionment.

The details of the subscription to the Loan show that the National Banks, have, upon the whole, acted liberally—more than a hundred millions of dollars having been subscribed for by them on their own account.

It is not unreasonable to tender to these institutions the opportunity to subscribe for bonds under the act of July 14, 1870, to an amount equal to the deposits required of them as security for circulation, and to couple that offer with a provision that, after ninety days, to the extent that the offer may be declined, other banking associations may be formed in the several States where the existing banks shall have failed to make the required subscription, and the circulation transferred from such banks to the new associations.

The banks now organized cannot justly complain, if, having an opportunity to pursue the business upon the new bonds, and declining it, other associations shall succeed to their franchises and rights.

The business of the Bureau of Engraving and Printing has been carried on with diligence during the year, and with satisfactory results.

Although some efforts have been made at counterfeiting the special papers used by the Department, they have not been successful, and the specimens captured are so crude as not to excite serious apprehensions as to ultimate success.

Since the first of July, 1869, seventy million sheets of paper have been manufactured, all of which have been accounted for on the books of the Department.

I respectfully recommend that an appropriation be made for a new issue of national bank notes. Those now in use are much worn and very successful counterfeits of several denominations have appeared.

The public building used as a custom-house, court-house, and post office, at Chicago, was destroyed by the great fire on the 8th of October last. The exterior walls remain, and the building could be repaired, but, anticipating the growth of Chicago and the magnitude of its

public business, I advise the erection of a building suited to the wants of a first-class city.

It is important that a much larger piece of land should be obtained, either by addition to the present lot or by the purchase of another site. On the 18th of October last, I wrote a letter to Governor Palmer, asking him to recommend to the Legislature the passage of an act granting authority to the courts of the State of Illinois to condemn such land as might be required, in case the Government should be unable to obtain it by purchase at a reasonable price, payment to be made upon an appraisal. In every case, the site for a building erected by the Government for public uses should be large enough to separate it from all other structures, thus furnishing sufficient light for the prosecution of business, and adequate security also against fire and the depredations of lawless persons. It is hardly necessary to say, that in the existing condition of affairs at Chicago, it is important that an appropriation, available during the present fiscal year, should be made without unnecessary delay.

Since my last annual report, the Supervising Architect has completed the custom-house, court-house, and post office, at Portland, Maine; the court-house and post office at Des Moines, Iowa; the court-house and post office at Madison, Wisconsin; the appraisers' stores at Philadelphia; and the assay office at Boise City, Idaho.

It is now expected that the custom-house and post office at St. Paul, Minnesota; the marine hospital at Chicago, Illinois; the court-house and post office at Astoria, Oregon; the custom-house at Machias, Maine; the branch mint at San Francisco, California; and the custom-house at Cairo, Illinois, will be finished and ready for use by the first day of July next. At that time there will remain, in an unfinished condition, the court-house and post office at Columbia, South Carolina; the custom-house at New Orleans, Louisiana; the custom-house at Charleston, South Carolina; the court-house and post office at Knoxville, Tennessee; the custom-house and post office at Portland, Oregon; the court-house and post office at New York; the post office and independent treasury at Boston, and the custom-house and post office at Omaha, Nebraska.

The prosecution of these works—four of which are of great importance—in connection with public buildings to be erected at Chicago, and the erection of marine hospitals at Pittsburg, San Francisco, and New York, will, in my opinion, sufficiently occupy the Supervising Architect of the Treasury and the force at his command. I cannot, therefore, advise appropriations for other public buildings until some of those in process of construction shall have been completed. The points at

which the erection or repair of public buildings is most needed are Hartford, Indianapolis, Cincinnati, and St. Louis.

Under an act passed at the last session of Congress, appropriating two hundred thousand dollars for the purpose of more effectually securing life and property on the coasts of New Jersey and Long Island, a careful examination of the coast and of the life-saving stations has been made by experienced officers of the revenue service. In accordance with their report, proposals were invited and accepted for the erection of fourteen new houses on the coast of New Jersey and six upon the coast of Long Island. Repairs are also making upon the old houses on the Long Island coast.

The operations of the coast survey, which are under the administrative direction of this Department, have been prosecuted with the usual energy, as will be seen from the brief report of progress made by the Superintendent, in advance of the usual detailed report, with maps, annually submitted to Congress.

The survey of the Atlantic coast is now rapidly approaching completion, that of the Gulf coast is more than half finished, and the work on the Pacific coast is being pressed forward vigorously.

The estimates submitted substantially conform to the appropriations for the present year. An increase is asked for the item of extending the triangulation across the country to the Pacific ocean, great interest having been manifested by the authorities of the States traversed in the prosecution of the work.

The business entrusted to the Light-House Board is one of the most important branches of the public service in the control of this Department, and I am able to state that it is conducted with fidelity and with reference solely to the maritime interests of the country.

The estimates made by the Light-House Board exceed the appropriations for the present year but they appear to be necessary, and I respectfully recommend them to the consideration of Congress.

Under an act of Congress, approved July 30, 1870, Dr. John M. Woodworth has been appointed Supervising Surgeon of the Marine Hospital Service. His administration is satisfactory to the Department.

The average number of hospital patients for the fiscal year ending June 30, 1870, was one thousand and sixteen, and for the year ending June 30, 1871, one thousand one hundred and ninety-eight. The total cost of the service for the first-named year was \$405,624, being an average, for each patient, of \$1 09 per day; and for the latter year \$453,082 42, or an average of \$1 04 per day.

In the first-named year the hospital tax was \$168,153 70, and in the latter year it amounted to \$293,592 14.

The Supervising Surgeon is of opinion that pavilion hospitals are better adapted to the successful treatment of the sick than the ordinary buildings of brick and stone, while the expenses are only one-fourth as great.

In accordance with his suggestion, I recommend an appropriation of fifty thousand dollars for the purchase of land and the construction of a pavilion hospital at Pittsburg, Pennsylvania. The present hospital is situated in the vicinity of iron mills and railways, and as it can be sold for about seventy thousand dollars, the Government will be fully reimbursed for the cost of a new hospital, while the comfort of the patients will be promoted.

An estimate has been made that the sum of fifty thousand dollars will be sufficient for the construction of a pavilion hospital on Angel Island, in the Bay of San Francisco, sufficient to accommodate one hundred and fifty patients, and I also recommend an appropriation of that amount for that purpose.

I also respectfully renew the recommendation, made heretofore, for a pavilion hospital near the city of New York sufficient for the accommodation of two hundred patients.

The Revenue Marine Service employs twenty-five steam-vessels and eight sailing vessels. In addition to these, there are two large steamers upon the Lakes, not in commission, and two schooners upon the coast condemned as not fit for duty.

Of the six large steamers upon the Lakes, four only are in commission, and as the others are not needed, I have the honor to recommend that authority be given for their sale.

During the last year four iron steamers have been built—three of two hundred and fifty, and one of three hundred and fifty tons burden. Under the existing appropriation of two hundred thousand dollars, the Department is about to issue proposals for four small iron propellers, two for the Pacific and two for the Atlantic coast.

A further appropriation of two hundred thousand dollars is needed to enable the Department to carry into effect the recommendation of the Commission, whose report was approved by the Department and submitted to Congress May 26, 1870.

The plan recommended by the Commission, when fully adopted, will effect a reduction in the expenses of this branch of the service of about five hundred thousand dollars, or about thirty-four per cent. of the whole cost. The changes proposed contemplate the use of vessels of less tonnage, and a consequent reduction in the number of men employed.

The expenses of the Revenue Marine Service for the year ending

June 30, 1871, were \$1,251,984 52, against \$1,138,393 31 for the preceding year. The first quarter of the present fiscal year shows a reduction in expenses of \$83,201 42, as compared with the corresponding period of the preceding year.

At the date of my last report, a board of officers was in session charged with the duty of examining the officers then in active service. The report showed that five captains, ten first lieutenants, nine second lieutenants, and ten third lieutenants, were not qualified for duty. The persons found to be incompetent have been discharged, and their places have been filled by promotion and by the appointment of additional officers, after a competitive examination.

There are several officers in the service who, on account of age, are unfit for active duty. For the supply of officers in their places, and for the increase of the number of engineers, rendered necessary by the substitution of steam for sailing vessels, additional appropriations are required for the next fiscal year. This branch of the public service is, upon the whole, in a satisfactory condition.

During the third session of the 41st Congress a bill was submitted for the organization of a Mint Bureau. The bill passed the Senate but failed in the House of Representatives; though not, as I am informed, from any objection to the principles on which it was framed. I urgently recommend the passage of a similar bill at the present session of Congress. All the Mints and Assay Offices are nominally in charge of the Treasury Department; but there is not, by authority of law, any person in the Department who, by virtue of his office, is supposed to be informed upon the subject; and no one on whom the Secretary of the Treasury can officially rely for information or advice in the management of this important branch of the public business.

It is estimated that the internal commerce of the country is fifteen times as great as our external commerce, but the statistics are not trustworthy or complete; and I respectfully recommend that provision be made for obtaining such returns as will show fully the trade of the country upon the rivers, canals, lakes, and railways.

The report of Mr. Charles Bryant, Special Agent, who has had charge of the fur seal-fishery at the Islands of St. Paul and St. George, shows that the business has been conducted by the Alaska Commercial Company in substantial conformity to the terms of the contract. Mr. Bryant suggests an appropriation for the construction of a house upon each island, for the accommodation of the agents of the Government, who at present are dependent upon the company for board and shelter; and, although I am not aware that any evil has resulted from the



arrangement, it is manifest that it ought not to be continued. It is estimated that an appropriation of five thousand dollars will be sufficient for a suitable building on each island.

The agents charged with the management of the seal fishery have been detailed from the customs service. As the full number of agents authorized by law is needed upon customs business, I respectfully recommend that authority be given for the appointment of two agents and two assistant agents, and that a suitable appropriation be made for their salaries and expenses. The necessity of two agents at each island is apparent. The agents will desire to return to the States as often as once in two years; and, moreover, it is wise for the Government to have not less than four persons in its employment connected with the care of the people and the business of the islands.

Mr. Bryant also makes suggestions as to further provision for the care of the natives, which appear to me to deserve consideration.

I again call the attention of Congress to the importance of increasing the salaries of the Bureau Officers and Heads of Division in the Treasury Department.

At present there is great inequality and injustice existing. The First Comptroller receives a salary of five thousand dollars a year, while the Second Comptroller and other Bureau Officers, whose duties are hardly less important, receive only three thousand dollars. The Solicitor of the Treasury is upon a salary of three thousand five hundred dollars, while the Solicitor of Internal Revenue, whose duties are less important, receives a salary of four thousand dollars.

The Heads of Division, in the Internal Revenue, receive salaries of twenty-five hundred dollars per annum, while in every other branch of the Treasury they are selected from fourth class clerks, whose salaries are fixed by law at eighteen hundred dollars a year; although, for several years an appropriation has been made from which the Secretary of the Treasury, in his discretion, has increased the salaries in his own office to twenty-eight hundred dollars per annum.

It is not an exaggeration to say that the head of a division in charge of the loans, of the warrants, or of the sub-treasury accounts, occupies a position in which the country and the world are more concerned than in that of the Collector of Customs at New York; yet the latter officer receives more than fifty thousand dollars a year, while it is with difficulty that the former is able to secure the inadequate sum of twenty-eight hundred dollars.

The same remark might with truth be made of several Bureau Officers, and of persons in the office of the Treasurer of the United States.

In this connection, I also recommend an increase of the salary of the Supervising Surgeon of the Marine Hospitals.

I think it my duty to speak of the provisions of the act creating the Department of Justice, by which the Solicitor of the Treasury and the Solicitor of the Internal Revenue Office are made officers of that Department. The proper and essential duty of the Solicitors is to give advice to the Secretary and Bureau officers upon questions which arise in the daily business of the Department. Under the existing system, the Attorney General is made nominally responsible, while, in fact, he ought to be exempt from all responsibility for the advice given by these officers, that, upon a reference to him of questions which may have been previously considered by them, he may be free to revise or reverse their action. These officers should receive their appointments through the Treasury Department, and be responsible to its head. It is a fundamental error in administration, to place in one of the Departments officers deriving their appointment from another Department.

Should the Attorney General transfer these officers to the Department of Justice, as appears to have been contemplated by the act, this Department would be deprived substantially of their services. I earnestly recommend the restoration of these officers to their former positions in the Treasury.

The examination of persons designated for clerical service, and for promotion in the Treasury Department, has been continued, with beneficial results; and the examination is even more exacting in its requirements than at the date of my last annual report. Means will be taken to extend the system, with such modifications as the difference of duties may suggest, but with equal efficiency, if possible, to the principal custom-houses, and to other branches of the public service under the control of this Department.

On the 28th of February last public notice was given that on the 6th of the following March books would be opened in this country and in Europe for subscriptions to the National Loan, under the act approved July 14, 1870, and the conditions on which the subscriptions would be received were also made known. All the national banks, and a large number of bankers both in this country and in Europe, were authorized to receive subscriptions. The first preference was given to subscribers to the five per cent. bonds, within the limit of two hundred millions of dollars. On the 1st of August the subscriptions amounted to sixty-five millions seven hundred and seventy-five thousand five hundred and fifty dollars, chiefly by the national banks. .

Under date of July 14, 1871, a despatch was received from Hon. William A. Richardson, Assistant Secretary of the Treasury, then in London, stating that certain bankers in Europe proposed to take the remainder of the two hundred millions of five per cents. upon certain conditions. This proposition was considered and modified, and early in August an agreement was made with Messrs. Jay Cooke & Co., representing bankers in Europe and in the United States. By the terms of the agreement, the parties represented by Messrs. Jay Cooke & Co. had the right to subscribe for the remainder of the two hundred millions of said bonds, by giving notice thereof, at any time previous to the first of April next, and by subscribing for ten millions at once and for an average of at least five millions of dollars of bonds per month during the intervening time, subject to the right of the national banks to subscribe for fifty millions of dollars within sixty days from the 25th day of August.

It was also agreed that the subscriptions should all be made through national banks, and certificates of deposit therefor issued by said banks to the Secretary of the Treasury, bonds to be lodged with the Treasurer of the United States for the amount of the deposit. By a printed circular issued on the 10th of August, 1871, it was announced that national banks making or obtaining subscriptions, payable in coin, would be designated by the Secretary of the Treasury as depositories of public money, on the usual condition of placing in the hands of the Treasurer of the United States bonds of the United States for the security of such deposits; and that, at the commencement of each month, notice would be given of the redemption of an amount of bonds equal to the amount of subscriptions in coin for the preceding month, interest to cease in ninety days from the date of such notice.

It was also stated in the circular that, as the bonds called should mature, the deposits would be drawn from the several banks proportionately.

It was further agreed that the subscribers to the loan should receive as commissions whatever might remain of the half of one per cent. allowed by law upon the two hundred millions, after paying the cost of paper for the bonds, for engraving, printing, advertising, delivery, and all other expenses of the same.

Under this agreement the books were opened in this country and in Europe, and by the last of August subscriptions were obtained for the entire amount offered.

On the first of September public notice was given that certain five-twenty bonds, to the amount of one hundred millions of dollars,

of the issue of 1862, specified by number as nearly as was practicable, according to the provisions of the act of July 14, 1870, would be paid on the first of December, and that the interest would cease on that date. Of the bonds so called, more than eighty millions of dollars are now in the possession of the Department; of which amount, seventeen millions of dollars have been paid in coin, and the remainder have been received or deposited in exchange for the five per cent. bonds.

Previous to September five per cent. bonds to the amount of \$62,139,550, had been issued and payment made therefor. The work of delivering the bonds subscribed for at that date is now going on, and under such circumstances as to leave no doubt that the whole business will be concluded in a brief period of time.

By the act establishing the national banking system, the Secretary of the Treasury was authorized to make them depositaries of any public money, except receipts from customs; and the act authorizing the refunding of the national debt directed the Secretary of the Treasury to give three months' notice of the payment of any bonds which, in such notice, might be specified and called for payment. In the same act it was provided that the money received for the new bonds should be used only in payment of bonds outstanding known as five-twenty bonds. The statute proceeded upon the idea that the holders of five-twenty bonds should receive three-months' interest upon their bonds after notice should be given by the Government.

As this notice could be given safely only upon subscriptions already made or secured, the general necessary result, even in case the money were paid into and held in the Treasury of the United States, would be a loss of interest for three months.

On the 1st of August last the demand for the new bonds had nearly ceased; but, by the agreement referred to, the necessary loss to the Government incident to the refunding of the public debt was made the means of securing subscriptions to the amount of about one hundred and thirty millions of dollars.

The banks, or those represented by the banks, derived an advantage in the use of the amount of their subscriptions for three months, but this without other loss to the Government than what was incident to the negotiation of the loan under the law.

I am informed by Judge Richardson, and such is my own opinion, that the most serious obstacle in the way of negotiating the four and four-and-a-half per cent. bonds in Europe is the inadequacy of the commissions allowed. When the circular of the 28th of February last was issued, one or two leading European bankers declined to act as agents,

and I am persuaded that others who accepted the agency failed to give that attention to the business which would have been bestowed upon it had the commissions corresponded more nearly to those usually received by them for the negotiation of public loans. The credit of the country is fully established in every financial centre of Europe, and the bonds of the United States can be negotiated at their market value in a larger number of cities than the bonds of any other country in the world. Under these circumstances, I think it my duty to advise such an allowance for commissions upon the four and four-and-a-half per cent. bonds as will secure the negotiation of them with the least possible delay. It needs no analysis of the subject to show that the interests of the country will be greatly promoted by the proceeding, even though the commissions should seem to be unnecessarily large. I also recommend that authority be given for the payment of interest in London. This can be done without the least cost or risk to the Government.

Returns for the fiscal year 1870-71 show that the ocean commerce of the United States is passing rapidly into the hands of foreign merchants and shipbuilders. In the year 1860, nearly seventy-one per cent. of the foreign commerce of this country was in American ships; in 1864, it had fallen to forty-six per cent.; in 1868, to forty-four per cent.; and in 1871, it is reported at less than thirty-eight per cent.

The loss of the shipping of the United States is due chiefly to two causes—first, the destruction of American vessels by rebel cruisers during the war; and, secondly, the substitution of iron steamships for the transportation of freight and passengers upon the ocean, in place of sailing vessels and steamships built of wood.

When the war opened English builders of iron steamships had acquired considerable proficiency, and since that period the art has been carried to higher perfection in Great Britain than in any other part of the world. It is stated that the superiority of British machinery and knowledge of the business by British mechanics give an advantage over American shipbuilders equal at least to ten per cent. upon the cost of construction. They possess additional advantages in the cost of labor, the cost of iron, coal, and other materials, and in the rate of interest upon the capital employed, equal in all to about twenty per cent. more, so that the difference in favor of British shipbuilders is at least thirty per cent.

In considering the means for the restoration of our ocean commerce, two facts must be accepted: First, that it is useless to attempt to revive it with wooden ships; and, secondly, that iron ships moved by sails

cannot compete with iron ships propelled by steam. Hence, the only practical questions for consideration are these: Can the construction of iron steamships be established in this country, and, if so, by what means?

The trans-ocean commerce of the United States would employ about six million tons of shipping, if each vessel made but one round voyage in a year. The value of our exports and imports has already reached the sum of nearly eleven hundred millions of dollars, and during the present decade it will exceed fifteen hundred millions of dollars annually. The annual returns for freight and passengers are about one hundred millions of dollars.

The history of the loss of our commerce, as shown in the statistics already given, renders it certain that without some efficient action on the part of the Government, the entire foreign trade of the country will soon pass into the hands of our rivals.

The monopoly of the trade between the United States and Europe by foreign merchants and shipbuilders carries with it the monopoly of shipbuilding for the entire world, and, as a consequence, the Atlantic trade, the trade of the Pacific, and the seas adjacent thereto, will be carried on in English-built steamers.

An alteration of the law by which foreign-built vessels may be admitted to American registry will furnish no adequate relief. On the contrary, the change would stimulate shipbuilding in England, while the prospect of establishing it on this continent would diminish in proportion to the prosperity of the business in the ship-yards of our rivals.

In view of the facts of our extensive coast upon the Atlantic and Pacific oceans, and our position with reference to Europe and Asia, the country ought not to be satisfied with any policy which does not look to the establishment and continuance of shipbuilding in the United States, the encouragement of our own seamen and merchants, and the control of so much, at least, of the commerce of the world as is derived from the export of our products and the importation of articles required for domestic consumption.

The removal of duties upon foreign articles used in the construction of iron steamships, or the allowance of a drawback equal to the amount of duties paid, will not, in the existing condition of things, secure the reestablishment of the business. But were it otherwise, the removal of duties or the allowance of drawback raises practical questions of great difficulty, while any concession by an indirect process is likely in the end to prove unnecessarily expensive to the country. Several of the

existing lines of European steamers were established by the aid of Government subsidies. They are still encouraged by the same means; and it is unreasonable to expect that our merchants and shipbuilders can successfully compete with this formidable combination, unless they are supported by the power of their own Government.

After careful consideration of the whole subject, I am prepared to advise the passage of a law guaranteeing to persons who may employ in the foreign trade American-built first-class iron steamships of not less than two thousand tons burden each, an annual payment, for the period of five years, of the sum of thirteen dollars per ton. The subsidy should be proportionately less to vessels of lower classification.

In making this recommendation, I do not assume that there is no other practicable method of restoring our commerce, but I present it as the method which appears to me to be the most efficient and economical.

Connected with this plan, it will be wise to consider whether the ships may not be so constructed as to be available for naval purposes, and, in case of war, subject to the right of the United States to take them upon payment of their appraised value. A similar suggestion was made by the Secretary of the Navy in his report for the year 1869. They should also be required to carry the mails upon moderate terms, or in consideration of the subsidy.

The use of sailing vessels and steamers built of wood may be continued successfully in the coasting trade, the trade with the British possessions, and upon the rivers and lakes of the country; but any effort to regain our former position upon the ocean by their agency must end disastrously.

I entertain the opinion that the policy suggested will be effectual, and that in a comparatively short period our mechanics and artisans will acquire equal skill with those of England, and that we shall not only have the aid of the best machinery now in use elsewhere, but that important improvements will be made, calculated to place the country in a position of superiority.

We shall also be able to test practically the quality of American iron, which, for the purpose of shipbuilding, is represented as better than that used in Great Britain.

If it shall appear, as is claimed, that American iron is about ten per cent. better than the iron used in England, an advantage will be secured, not only in the diminished cost of the vessels, but also in the increased tonnage capacity of American ships of equal dimensions over those constructed with inferior materials.

Accepting as a truth, established by experience, that the ocean com-

merce of the world is to be carried on in iron steamships, we must consider and decide whether the United States shall disappear from the list of maritime nations, or whether, by a determined and practical effort, we can regain the position which we occupied previous to the late rebellion.

GEO. S. BOUTWELL,  
*Secretary of the Treasury.*

HON. JAMES G. BLAINE,  
*Speaker of the House of Representatives.*



# PAPERS

ACCOMPANYING

## REPORT OF THE SECRETARY OF THE TREASURY.

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### REPORT OF THE COMMISSIONER OF INTERNAL REVENUE.

TREASURY DEPARTMENT,  
OFFICE OF INTERNAL REVENUE,  
*Washington, November 21, 1871.*

SIR: During the fiscal year covered by the following report Hon. C. Delano was Commissioner from July 1 to November 1, 1870, and Hon. A. Pleasonton from January 3 to its close. During November and December, 1870, and until January 3, 1871, I was Acting Commissioner by reason of the vacancy caused by the resignation of Mr. Delano.

I have the honor to transmit herewith the tabular statements made up from the accounts of this office, which the Secretary of the Treasury is required to lay before Congress, as follows:

Table A, showing the receipts from each specific source of revenue and the amounts refunded in each collection district, State, and Territory of the United States for the fiscal year ended June 30, 1871.

Table B, showing the number and value of internal revenue stamps ordered monthly by the Commissioner, the receipts from the sale of stamps and the commissions allowed on the same; also the number and value of stamps for tobacco, cigars, snuff, distilled spirits, and fermented liquors, issued monthly to collectors during the fiscal year ended June 30, 1871.

Table C, showing the territorial distribution of internal revenue from various sources in the United States for the fiscal years ended June 30, 1864, 1865, 1866, 1867, 1868, 1869, 1870, and 1871.

Table D, showing the aggregate receipts from each collection district, State, and Territory for the fiscal years ended June 30, 1863, 1864, 1865, 1866, 1867, 1868, 1869, 1870, and 1871.

Table E, showing the total collections from each specific source of revenue for the fiscal years ended June 30, 1863, 1864, 1865, 1866, 1867, 1868, 1869, 1870, and 1871.

Table F, showing the ratio of receipts from specific sources to the aggregate of all collections for the fiscal years ended June 30, 1864, 1865, 1866, 1867, 1868, 1869, 1870, and 1871.

Table G, an abstract of reports of district attorneys concerning suits and prosecutions under the internal revenue laws during the fiscal year ended June 30, 1871.

Table H, an abstract of seizures of property for violation of internal revenue laws during the fiscal year ended June 30, 1871.

Table I, showing the number of proof-gallons of spirits in each collection district, State, and Territory in the United States, exclusive of the quantity in internal revenue warehouses, May 1, 1871.

These tables exhibit the full result of the operations of this Bureau from its organization to the present time.

The aggregate receipts from all sources, exclusive of the direct tax upon lands, and the duty upon the circulation and deposits of national banks, were, for the fiscal year 1871, \$144,011,176 24. This sum includes the amounts refunded and allowed on drawbacks.

Drawbacks have been allowed on general merchandise, under section 171, act of June 30, 1864, limited by the act of March 31, 1868, amounting to \$22,887 97. This amount is larger than that allowed for the fiscal year 1870, on account of the adjudication of old claims for drawback on cotton goods rendered admissible by joint resolution No. 78, approved July 14, 1870.

There was refunded during the past fiscal year, for taxes illegally assessed and collected, the sum of \$617,581 07. This large increase over the year preceding was due to the adjustment of claims that had been suspended during former years, for more complete consideration; for instance, the claim of one of the States which was embraced in the above aggregate, and amounting to \$45,866, for taxes collected on dividends declared upon stock owned by the State. This was the largest claim ever allowed by the Bureau, and was referred to the Attorney General for his advice.

My estimate of the receipts for the current fiscal year under the present law is \$125,000,000.

#### SPIRITS.

The number of distilleries (other than fruit) registered during the last fiscal year was.....	1, 043
Number of fruit-distilleries registered.....	7, 149
Total.....	<u>8, 192</u>

Of the distilleries (other than fruit) 517 were operated during the year, and of the fruit-distilleries, 4,007.

The returns to this office for the last fiscal year show a total production in taxable gallons, from material other than fruit, of.....	54, 576, 446
From fruit.....	2, 199, 733
Total yearly production.....	<u>56, 776, 179</u>

	Gallons.
The quantity of spirits in bond July 1, 1870, was.....	11, 671, 886
The quantity entered in bond for the year ended June 30, 1871, was.....	54, 576, 446
The quantity withdrawn from bond during last period, was.....	59, 503, 972
The quantity remaining in bond June 30, 1871, was.....	6, 744, 360
The quantity remaining in bond July 1, 1870, as per present report, less than quantity stated in the report for 1870, shown by corrected reports of collectors received subsequent to the publication of the report for 1870 was.....	10, 572

The total quantity of spirits in the United States, not in internal revenue warehouses, on the 1st of May, 1871, was 41,185,713 proof-gallons, showing a decrease in the quantity on the market since November 15, 1870, of 4,452,580 gallons.

The receipts from spirits for the fiscal year ended June 30, 1871, were as follows:

Spirits distilled from apples, grapes, and peaches.....	\$1, 236, 005 67
Spirits distilled from materials other than apples, grapes, and peaches.....	29, 921, 308 48
Distilleries, per diem tax on.....	1, 991, 602 98
Distillers' special and barrel tax.....	5, 683, 077 31
Rectifiers.....	959, 800 18
Dealers, retail liquor.....	<u>3, 651, 484 73</u>

Dealers, wholesale liquor.....	\$2, 151, 231 06
Manufacturers of stills, (special tax).....	1, 927 49
Stills or worms, manufactured.....	3, 240 00
Stamps, warehouse, rectifiers' and wholesale liquor dealers'.....	758, 427 00
Excess of gaugers' fees.....	13, 693 20
<b>Total.....</b>	<b>46, 281, 843 10</b>

The following tabular statement shows the distribution of distilleries in the various States and Territories:

*Statement showing the number of distilleries registered and operated during the fiscal year ended June 30, 1871.*

States and Territories.	Grain.		Molasses.		Fruit.		Total number registered.	Total number operated.
	No. registered.	No. operated.	No. registered.	No. operated.	No. registered.	No. operated.		
Alabama.....	9	1			75	8	84	9
Arizona.....	2	1			40	1	42	2
California.....	11	6	1		341	150	353	156
Connecticut.....	6	5			170	133	176	138
Delaware.....	1				70	67	71	67
Georgia.....	2	1			347	209	349	210
Idaho.....	2	1					2	1
Illinois.....	54	54			48	14	102	68
Indiana.....	32	26			213	56	245	82
Iowa.....	21	3			13		34	3
Kansas.....	5	3					5	3
Kentucky.....	262	128			673	406	935	534
Louisiana.....	16	2	10		1		27	2
Maine.....			1	1			1	1
Maryland.....	36	9	2		83	8	121	17
Massachusetts.....	2	2	8	8	54	48	64	58
Michigan.....	3	2					3	2
Minnesota.....	4	1					4	1
Mississippi.....	7	1			6		13	1
Missouri.....	36	13			129	7	165	20
Montana.....	2	2					2	2
Nebraska.....	2	2					2	2
Nevada.....	1						1	
New Hampshire.....			1		2	2	3	2
New Jersey.....	5	3			222	136	227	139
New Mexico.....	1				9	1	10	1
New York.....	75	18	2	2	132	86	209	106
North Carolina.....	18				1, 757	1, 218	1, 775	1, 224
Ohio.....	84	65			88	48	172	113
Oregon.....	3				5	2	8	2
Pennsylvania.....	180	95	2		74	47	256	142
Rhode Island.....	5		1	1	67		1	
South Carolina.....	5				67	53	72	53
Tennessee.....	48	22			524	380	572	402
Texas.....	5				16		21	
Vermont.....	1	1			14		1	1
Virginia.....					14	8	14	8
Washington.....	50	21			1, 705	864	1, 845	885
West Virginia.....	4	1					4	1
Wisconsin.....	7	2			181	55	188	57
Wyoming.....	13	8					13	8
<b>Total.....</b>	<b>1, 015</b>	<b>505</b>	<b>28</b>	<b>12</b>	<b>7, 149</b>	<b>4, 007</b>	<b>8, 192</b>	<b>4, 524</b>

## SURVEYS OF DISTILLERIES.

Uniformity in estimating the spirit-producing capacity of distilleries being indispensable to a just and equal assessment of the tax, a classification of distilleries has been arrived at, based upon the different kinds of material used and the modes of operating; and rules have been given for estimating the capacity of each class, which experience has shown to be equally just to the Government and the distillers.

The local surveyors having been thoroughly instructed in their duties, the expense of making surveys will be materially lessened in the future.

## SPIRIT-METERS.

By the annual report for 1870, page 7, it will be seen that Tice's Sample Meters, theretofore adopted and prescribed for use in distilleries, were then being tested for the purpose of determining their utility. The period within which distillers were required to procure meters was extended from time to time until the 8th day of June, 1871, when Circular No. 96 was issued discontinuing their use.

## GAUGING INSTRUMENTS.

Correctness and uniformity in the weighing and gauging of spirits are necessary to a just collection of the tax and to avoid unnecessary detention of spirits in transit. These objects can only be attained by the use of instruments of the same standard.

To accomplish these objects, in addition to the hydrometer prescribed for use in 1867, there has been adopted what is known as the "Prime and McKean's Combination Gauging Rod," which is required to be used for determining the capacity of casks.

To secure accuracy in these instruments, arrangements have been made by which all hydrometers and gauging rods are inspected and tested in this office before being sent out for use.

Internal revenue gaugers are furnished with hydrometers at the expense of the Government, but are required to supply themselves with the combination rod at their own expense.

These instruments, distributed under the present system of inspection, seem to give general satisfaction, and their accuracy and uniformity have relieved the trade of the embarrassments resulting from errors in gauging.

## FERMENTED LIQUORS.

The amount of tax received on fermented liquors at \$1 per barrel was, for the years—

1866.....	\$5, 115, 140 49	1869.....	\$5, 866, 400 98
1867.....	5, 819, 345 49	1870.....	6, 081, 520 54
1868.....	5, 685, 663 70	1871.....	7, 159, 740 20

The increase for the year 1871, as shown in the above statement, is believed to be due, in part at least, to the greater attention given to that subject by internal revenue officers during that year. This attention has revealed some defects in the law, which call for early remedial legislation.

## TOBACCO.

The total receipts from tobacco for the fiscal year ended June 30, 1871, were \$33,578,907 18. As compared with the receipts from the same source for the preceding fiscal year, the accompanying tables show the following results:

Year ended June 30, 1871, tobacco, chewing, &c., and snuff.....	\$20, 677, 717 84
Year ended June 30, 1870, tobacco, chewing, &c., and snuff.....	19, 708, 780 61
Showing an increase in class 32-cents of .....	968, 937 23
Year ended June 30, 1871, tobacco, smoking, scraps, shorts, &c .....	\$4, 882, 821 83
Year ended June 30, 1870, tobacco, smoking, scraps, shorts, &c .....	4, 591, 702 81
Showing an increase in class 16-cents of .....	291, 119 02
Year ended June 30, 1871, cigars, cheroots, &c .....	\$6, 598, 173 24
Year ended June 30, 1870, cigars, cheroots, &c .....	5, 718, 780 04
Showing an increase on cigars, &c., of.....	879, 393 20

Year ended June 30, 1871, received from sale of export stamps.....	\$66, 147 00
Year ended June 30, 1870, received from sale of export stamps.....	48, 097 50
<b>Increase from sale of export stamps.....</b>	<b>18, 049 50</b>
Year ended June 30, 1871, received from dealers in leaf-tobacco .....	\$221, 661 98
Year ended June 30, 1870, received from dealers in leaf-tobacco .....	200, 205 54
<b>Increased collection from dealers in leaf-tobacco.....</b>	<b>21, 456 44</b>
Year ended June 30, 1871, from dealers in manufactured tobacco .....	\$970, 017 96
Year ended June 30, 1870, from dealers in manufactured tobacco .....	929, 892 64
<b>Increased collection from dealers in manufactured tobacco.....</b>	<b>40, 125 32</b>
Year ended June 30, 1871, from special taxes of tobacco and cigar manufacturers.....	\$162, 367 33
Year ended June 30, 1870, from special taxes of tobacco and cigar manufacturers.....	153, 248 74
<b>Increased collection from special taxes of tobacco and cigar manufacturers.....</b>	<b>9, 118 59</b>

Showing a total increase of \$2,228,199 30 over the total amount of receipts from the same sources for the preceding fiscal year.

#### ANNUAL PRODUCTION.

The total amount of manufactured tobacco, represented by the amount of collections for the fiscal year ended June 30, 1871, was as follows :

	Pounds.
Chewing-tobacco, snuff, &c., class 32-cents .....	64, 617, 868
Smoking-tobacco, scraps, shorts, &c., class 16-cents .....	30, 517, 636
Add to this the quantity exported.....	10, 621, 082
And excess remaining in warehouses June 30, 1871, over June 30, 1870....	72, 377
<b>Giving a total product for the year, of.....</b>	<b>105, 828, 963</b>

The total number of cigars, cheroots, &c., on which taxes were collected, was 1,332,844,357.

The steady and uniform increase, from month to month, in the revenues derived from manufactured tobacco, cigars, &c., since the present law went into operation, by which the mode of collecting taxes on these articles was changed from an assessment after removal from the manufactory and sale, to a prepayment, by means of suitable stamps, before the goods are removed from the place of manufacture, has fully demonstrated the superiority of the present system over the former. Fewer frauds are possible where the taxes are required to be paid at the manufactory, and before the goods are allowed to go upon the market, and where every package is required to bear upon it the evidence that the tax has been paid. But, notwithstanding the encouraging progress that has been made toward a thorough and complete collection of the revenues from this source, I am forced to the conclusion that, during the last fiscal year, much tobacco has escaped taxation through the refilling of empty stamped packages, the second use of stamps, the use of counterfeit stamps, the removal of small quantities from the place of manufacture without stamps, and stamping as class 16-cents, tobacco which, under the law, should have been stamped at the rate of 32 cents per pound.

#### UNIFORM RATE OF TAX.

The present law imposes on all chewing-tobacco a tax of 32 cents per pound, and the same rate on all smoking-tobacco from which any por-

tion of the stems has been removed. But practically *all* smoking-tobacco, with slight exceptions, is claimed to be taxable only at the rate of 16 cents, and no one except the manufacturer knows or can know whether it contains all the stems which are natural to the leaf, or a less quantity. The natural leaf, cut with all the stems in, is, previous to being so cut, put through a process of sweetening, to fit it for chewing purposes, thus making it actually chewing-tobacco, though sold under the name of smoking-tobacco and stamped class 16-cents. By the manipulations of some manufacturers the fine-cut shorts, "which have passed through a riddle of 36 meshes to the square inch by process of sifting," constitute the bulk of their products and are used as chewing-tobacco, though paying a tax of only 16 cents per pound, while sweetened scraps, a product of plug manufacturers, are put up in large quantities and sold under the 16-cent tax for chewing purposes. A uniform rate of tax, while it would allow every manufacturer to manipulate his products in his own way without restrictions being placed upon his modes of manufacturing, would effectually close the door to the perpetration of fraud or the evasion of taxes by their improper classifications.

#### RESULTS OF A UNIFORM TAX AT DIFFERENT RATES.

From the tables presented in this report it will be seen that more than two-thirds of the manufactured tobacco which reached taxation during the last fiscal year paid the tax of 32 cents per pound, yielding four-fifths of the revenue which was collected directly from the article by stamps. Had a tax been collected at a uniform rate of 32 cents per pound on the entire product of manufactured tobacco which reached taxation during the last fiscal year, the receipts therefrom would have been \$30,443,361 28. Adding to this sum the taxes collected on cigars, the special taxes of manufacturers of tobacco and cigars, of dealers in leaf, and dealers in manufactured tobacco, &c., the total receipts would have been \$38,461,728 79. Similar calculations show that a uniform tax of 24 cents per pound on the same quantity would have realized the sum of \$30,850,888 47, and that a uniform rate of 16 cents per pound would have realized the sum of \$23,240,048 15. Thus, it will be seen that on the assumption that the same number of pounds would have reached taxation had the rate of tax been uniform, either at 16, 24, or 32 cents per pound, a uniform rate of 32 cents would have increased the revenue by the sum of \$4,882,821 61, while a uniform rate of 24 or 16 cents would have diminished those receipts in the sums respectively of \$2,728,018 71 and \$10,338,859 03. I am aware that it is contended by those who advocate a reduction of the tax to a uniform rate of 16 cents per pound that the increased consumption which would result from such a reduction, and the greater number of pounds which would reach taxation, would nearly, if not quite, compensate for the reduction in the rate. I am unable, however, to see any well-grounded reason for such a conclusion—first, because such a reduction would have little, if any, tendency to increase the consumption of smoking tobacco, as nearly all smoking-tobacco now pays but 16 cents tax; secondly, such a reduction alone would not tend to diminish the quantity of raw or leaf tobacco consumed, for most of the leaf-tobacco sold directly to consumers is used for smoking purposes, and the motive to smoke untaxed leaf would not be removed or lessened by diminishing the tax on chewing-tobacco; thirdly, because whatever increase in consumption there might be from such a reduction in the rate must necessarily be of chewing-tobacco, of plug, twist, fine-cut,

&c., and of snuff, and of these the consumption would have to be doubled, making it one hundred and twenty-eight millions of pounds, where it is now only sixty-four millions of pounds, in order to obtain the same amount of revenue as was collected the last fiscal year. Such an increase in the consumption of chewing-tobacco is not to be expected.

My own opinion is, that with the tax at 24 cents, taking into account the natural increase of the revenue as shown between the collections of succeeding years, and with the advantage of some legislation hereinafter recommended, we shall be able to keep the collections on tobacco up to those under the present rates.

This recommendation, however, is made without regard to its relation to future total revenue results. If it should be the opinion of Congress that the yield of revenue from internal taxes should not be materially decreased, then, to accomplish the desirable results expected from a consolidation of the tax on tobacco, and to compensate in part to the revenue the expected large loss from the expiration of the income-tax during the current fiscal year, and the further material loss from "Articles and occupations formerly taxed but now exempt," (a rapidly decreasing item, of course,) I would advise a consolidation of the tobacco tax at 32 cents per pound.

#### PEDDLERS OF TOBACCO.

I am satisfied, from the evidence which has accumulated at this office, that much of the fraud above-referred-to is effected through the instrumentality of peddlers.

In order to put an end to this illicit traffic some additional legislation is required. I would, therefore, recommend that every person who sells or offers to sell manufactured tobacco, snuff, or cigars from wagons in the manner of peddlers traveling from place to place, be required to pay a special tax of fifteen, twenty-five, or fifty dollars, according as they travel with one, two, or more horses or mules, and to comply with such regulations as may be prescribed by the Commissioner of Internal Revenue.

#### SALE OF LEAF-TOBACCO TO CONSUMERS.

For the last three years this office has been in possession of information that a large and increasing amount of raw or leaf tobacco, in portions of the country, was being sold at retail directly to consumers without the payment of tax. Evidences of this traffic have, from time to time, been furnished by assessors and collectors, and more especially by supervisors, who, in taking transcripts from the books required by law to be kept by leaf-dealers, have reported that they find scores of pages of these books where entries were made of sales from one-half pound to four pounds each; and I am constantly in receipt of letters from manufacturers of tobacco, complaining of the injury to their business arising from such sales, and informing me that in some localities where they formerly received frequent and large orders for manufactured tobacco they now make no sales, the same parties who used to make these orders now ordering instead supplies of natural leaf from the wholesale leaf-dealers. Against this traffic, grown to such large proportions, so injurious to their business as manufacturers, and prejudicial to the interest of the Government revenue, they ask to be protected.

To this end, I would recommend that section 59 of the act of July 20, 1866, be so amended as to impose a special tax of five hundred dollars on every person who shall make a business of selling raw or leaf-tobacco to persons other than those who have paid special tax as leaf-dealers,

or as manufacturers of tobacco, snuff, or cigars, or who shall sell leaf-tobacco in quantities less than twenty-five pounds, or who shall sell such tobacco directly to consumers, or for consumption without its being manufactured. And if this is not deemed sufficient, I would further recommend such a tax on the sales of such dealers in excess of \$5,000 annually as would be equivalent to the tax on the same amount and value of manufactured tobacco. Such a provision of law will not only give the required protection to the manufacturer who now pays a special tax for carrying on his business, in addition to a specific tax on all his products, but it will also, I am persuaded, tend largely to increase the Government revenue from this source.

#### EXPORT BONDED WAREHOUSES.

In the absence of any provision of law providing for drawback on manufactured tobacco and snuff when exported, the law has provided for a system of export bonded warehouses to be established at any port of entry in the United States for the storage of manufactured tobacco and snuff intended for exportation.

Under this provision of law there are now in operation sixteen export bonded warehouses, two having been established during the last fiscal year, viz, one at the port of Mobile, Alabama, and one at Portland, Oregon, while one of those previously established at Philadelphia has been discontinued.

The quantity of tobacco, &c., stored in the several export bonded warehouses during the fiscal year ended June 30, 1871, was as follows:

	Pounds.
Fourth district, Massachusetts.....	1, 503, 867
Thirty-second district, New York.....	12, 799, 611
Second district, Pennsylvania.....	2, 606, 556
Third district, Maryland.....	3, 060, 556
Third district, Virginia.....	2, 638, 529
First district, Louisiana.....	1, 547, 095
First district, California.....	2, 158, 883
First district, Oregon.....	64, 167
Total amount.....	<u>26, 379, 264</u>

The quantity withdrawn for exportation from the several export bonded warehouses during the fiscal year ended June 30, 1871, was as follows:

	Pounds.
Fourth district, Massachusetts.....	853, 724
Thirty-second district, New York.....	6, 699, 688
Second district, Pennsylvania.....	40, 838
Third district, Maryland.....	218, 916
Third district, Virginia.....	2, 630, 175
First district, Louisiana.....	10, 355
First district, California.....	167, 387
Total quantity exported.....	<u>10, 021, 063</u>

#### WITHDRAWN FOR CONSUMPTION.

The quantity withdrawn for consumption on payment of the tax, from the several bonded warehouses, for the fiscal year ended June 30, 1871, was as follows:

	Pounds.
Fourth district, Massachusetts.....	521, 237
Thirty-second district, New York.....	2, 464, 079
Second district, Pennsylvania.....	2, 658, 736
Third district, Maryland.....	2, 435, 503



	Pounds.
Third district, Virginia.....	32,784
First district, Louisiana.....	1,431,287
First district, California.....	1,930,164
First district, Oregon.....	24,969
Total for consumption.....	11,499,659

These figures show that less than half of the tobacco, &c., removed in bond from the manufactories, is actually exported. From the eight bonded warehouses established at the several ports of Philadelphia, Baltimore, New Orleans, San Francisco, and Portland, Oregon, in which were stored during the fiscal year ended June 30, 1871, 9,437,257 pounds of manufactured tobacco, only 437,495 pounds during this period were withdrawn for exportation, while 8,480,656 pounds were withdrawn for consumption on payment of the tax.

Nearly nine-tenths of all the tobacco exported from the country is shipped through the bonded warehouses at New York and Richmond, Virginia; and of this a large portion is never stored in the bonded warehouses. The shipments are made directly from the factories, the goods being carted by the warehouses, and only constructively entered therein, though the owners thereof are charged with a month's storage.

The practical operation of this system of bonded warehouses hitherto has been to give to a few individuals and firms, more particularly to the proprietors of the warehouses, the same facilities for storing tobacco without the prepayment of the tax as were given by the former system of Class B, bonded warehouses, abolished by the act of July 20, 1868.

It is my own opinion, and, so far as I have been able to ascertain, it is the opinion of manufacturers of tobacco generally, that the present system of export bonded warehouses can be entirely abolished to the interest both of the Government and of the manufacturers.

Under the present system all the tobacco bonded at the warehouse in Richmond, Virginia, is exported without ever entering the warehouse, and the same is true of much of the tobacco bonded in New York.

By abolishing the present system of export bonded warehouses, and providing for the exportation of manufactured tobacco, snuff, and cigars, as other merchandise is exported, allowing a drawback of the tax paid upon proof of landing abroad, requiring the tobacco to be loaded under the supervision of an inspector, and the tax-paid stamps to be destroyed by said officer to prevent relanding, it is believed a large portion of the expenses now incurred by the manufacturers in exporting their goods would be saved, the Government would receive the taxes on all goods when removed from the place of manufacture, all jobbers and dealers in manufactured tobacco would be placed on the same footing with regard to the traffic in tax paid goods, and the special privileges and advantages enjoyed by a few individuals and firms would be removed.

I would recommend that Congress provide that evidence of the loss at sea satisfactory to the Commissioner of Internal Revenue shall have all the force of a landing certificate for the purposes of drawback.

Other systems of exportation designed to remedy the evils of the present bonded warehouse system have been suggested; but they involve the multiplying of bonds to be taken in lieu of tax. A multiplication of such bonds would result in an increase of losses to the Government. The records of the United States courts in many sections of the country are largely occupied by suits on bonds taken for spirits and refined petroleum, under similar systems to those proposed. In a large majority of the cases, the principals being insolvent generally before suit was brought, the sureties have either not been found on original

process; or, if found, a return of no goods on final process has realized to the Government a total loss of its supposed security.

#### STAMPS.

Since the last annual report of the Commissioner, contracts have been made for printing revenue stamps as follows, viz: With Mr. Joseph R. Carpenter, of Philadelphia, for documentary and proprietary stamps; with the Continental Bank Note Company of New York, for printing tints for distilled spirits and tobacco stamps; with the National Bank Note Company of New York, for printing tints for beer stamps. These contracts were awarded to the lowest bidders possessing the facilities for doing the work, after due publication of advertisements for proposals in the newspapers of the various leading cities in the United States.

Important changes have been made in the materials and manner of preparing stamps in order to prevent fraudulent issues, counterfeiting, and re-use. Heretofore nearly all the issues of revenue stamps have been printed in a single color upon ordinary commercial paper furnished by the parties doing the printing. By the changes referred to, the Government provides a distinctive paper, and permits the printing of stamps upon no other, and requires that all stamps shall be printed in two or more colors.

It is well known that the revenue derived from stamps has seriously suffered through the fraudulent re-use of stamps. It has been found no difficult matter on the part of evil-disposed persons, by the use of chemicals carefully manipulated, to remove the cancellation-marks entirely without injuring the appearance of the stamps, thus enabling dishonest parties to re-use them, or to sell the same for re-use, and defraud the Government to that extent.

It is believed that the stamps now being furnished under the contracts alluded to, cannot be tampered with. Especially is this thought to be the case with the adhesive, and tobacco, snuff, and cigar stamps printed upon chameleon paper. This paper so effectually changes its color upon the application of chemical agents employed for the restoring of stamps for re-use, as to render restoration to its original state impossible. In addition to the protection afforded by this paper, a soluble ink is used in the preparation of adhesive stamps. This ink contains the ingredients of ordinary writing ink; any acid or alkali of sufficient strength to remove the cancellation made would destroy also that portion of the stamp which is printed in the soluble ink.

By printing the stamps in two or more colors, counterfeiting, which has been largely practiced by photography, becomes impossible.

Another feature in the present issue is, that with the exception of the documentary and proprietary stamps, none are allowed to be entirely prepared by any single establishment.

The New York Bank Note Company print the tints only of certain stamps, while the Bureau of Engraving and Printing finishes and delivers them to this office, from whence they are issued to collectors.

The paper used for printing these stamps was adopted especially for that purpose by the Secretary of the Treasury, upon the recommendation of this office, and is manufactured by Messrs. Jas. M. Willcox & Co., of Glenn Mills, Pennsylvania, under Government supervision. It is not lawful for any one to manufacture this paper, or to sell or have it in possession, except by authority of the Department.

It may be added that the average cost of the present series of stamps is considerably less per thousand than that of the previous issue.

## ABSTRACT OF CASES COMPROMISED.

The whole number of cases compromised, as provided under section 102, act of July 20, 1868, during the fiscal year ended June 30, 1871, was 730.

Amount of tax accepted.....	\$349,795 12
Assessed penalty fixed by law.....	20,076 36
Specific penalty in lieu of fines, penalties, and forfeitures.....	248,626 50
<b>Total amount received by compromises.....</b>	<b>618,497 98</b>

## ABSTRACT OF REPORTS OF DISTRICT ATTORNEYS FOR THE FISCAL YEAR 1871.

Number of indictments.....	4,217
Number of proceedings in rem.....	1,048
Number of other suits in personam.....	1,712
<b>Whole number commenced.....</b>	<b>6,977</b>
Number of convictions on indictments.....	1,232
Number of judgments recovered in other suits in personam.....	1,106
Number of judgments recovered in proceedings in rem.....	844
<b>Total number of suits decided in favor of United States.....</b>	<b>3,182</b>
Number of acquittals.....	258
Number of other suits in personam or in rem decided against the United States.....	198
<b>Total number of suits decided against the United States.....</b>	<b>456</b>
Number of suits settled, not prosecuted, or dismissed.....	2,306
Number of suits pending July 1, 1871.....	5,676
Amount of judgments recovered in suits in personam, including fines, &c.....	\$1,419,064 48
Amount collected and paid into court in suits in personam (including indictments) on account of judgments, fines, &c.....	594,339 97
Amount collected and paid into court as proceeds of forfeiture.....	145,238 51

*Statement showing the gross proceeds realized from sales, during the fiscal year 1871, under section 61, act of July 13, 1866, together with expenses and amount deposited; also the per cent. of expenses to gross proceeds.*

States.	Gross proceeds.	Expenses and stamps.	Amount deposited.	Per cent.
California.....	\$971 75	\$241 45	\$730 30	94.8
Connecticut.....	115 88	57 95	57 91	50.0
Georgia.....	504 57	341 28	160 29	62.2
Illinois.....	41 58	37 76	3 82	90.2
Indiana.....	159 15	16 00	143 15	10.0
Iowa.....	43 99	43 99		100.0
Kentucky.....	332 04	202 18	129 90	60.8
Mass.....	7 30	7 50		100.0
Massachusetts.....	1,031 55	516 94	514 61	50.1
New Jersey.....	46 90	6 30	40 70	13.2
New York.....	593 67	255 18	338 49	42.9
North Carolina.....	1,272 50	660 40	603 10	52.6
Ohio.....	154 30	48 11	105 49	31.6
Pennsylvania.....	1,233 41	509 53	723 84	41.3
South Carolina.....	255 11	184 44	70 67	72.2
Tennessee.....	170 84	48 03	122 51	28.1
Texas.....	228 98	99 01	129 26	43.3
Virginia.....	549 06	525 44	23 62	95.6
Wisconsin.....	87 80	77 36	9 84	88.7
<b>Total.....</b>	<b>7,790 20</b>	<b>3,891 44</b>	<b>3,907 84</b>	<b>49.9</b>

## ABSTRACT OF SEIZURES.

Seizures of property for violation of internal revenue law during the fiscal year ended June 30, 1871, were as follows:

272,737 gallons of distilled spirits, valued at.....	\$239,395 70
1,505 barrels of fermented liquors, valued at.....	9,560 00

2,907 pounds of snuff, valued at .....	\$387 10
281,283 pounds of tobacco, valued at .....	109,234 44
2,094,376 cigars, valued at .....	58,820 54
Miscellaneous property, valued at .....	397,333 36
Total value of seizures .....	<u>915,240 14</u>

#### ADDITIONAL RECOMMENDATIONS.

I fully approve, and would here renew, the following recommendation made in last year's report by the then Commissioner, Mr. Delano:

The act of July 14, 1870, exempted from taxation, under schedule C, canned and preserved fish, leaving prepared mustard, sauces, sirups, jams, and jellies still liable to the stamp tax. These articles being either condiments or preserves, and generally of home or culinary production, never having been a fruitful source of revenue, and the collection of the tax thereon always attended with no inconsiderable amount of trouble and vexation, I would recommend that they hereafter be relieved from the stamp tax now imposed upon them under the clause in schedule C relating to "canned meats," &c.

There are now in the hands of collectors and United States marshals, stored in bonded warehouses and elsewhere, considerable quantities of condemned, forfeited, and abandoned tobacco, so depreciated in value that it cannot be sold for enough to pay charges and for the necessary stamps. This tobacco was manufactured under the old law; consequently it is unstamped. Under the present law it cannot be sold or offered for sale without first being properly stamped, and there is no provision of law under which the Commissioner of Internal Revenue can furnish stamps for it. The want of authority to furnish stamps for such tobacco, which is constantly accumulating in the hands of Government officers, has caused much embarrassment. I would therefore earnestly recommend that Congress authorize the Commissioner, upon the requisition of the officers having the custody and control of such tobacco, to furnish suitable revenue stamps to be attached and cancelled before the same is offered for sale.

It frequently happens that tax-paid stamps are lost from packages of spirits by unavoidable accident, without fault on the part of the persons interested, the spirits being thus exposed to seizure and detention. The present law makes no provision for re-stamping such packages, except on the re-payment of the tax. Inasmuch as the stamp is a device to protect alike the interests of the Government and the tax-payer, it is considered that authority should be given to complete that protection by re-stamping.

It was recommended last year by Mr. Commissioner Delano that Congress provide, by joint resolution or otherwise, for the remission of all taxes assessed on ship-builders under the fourth section of the act of March 31, 1868, as had not been collected. No action, however, was taken upon the subject, and not feeling at liberty to allow further delay, I have ordered their collection.

Section 44 of the act of June 30, 1864, gives to the Commissioner, "subject to regulations prescribed by the Secretary of the Treasury," authority to abate and refund taxes and penalties in certain classes of cases. One of these regulations (Circular 79) provides in effect that no claim or application for the refunding of taxes will be entitled to consideration by the Commissioner, unless it shall be filed with him either prior to August 4, 1871, (Circular 79 having been issued August 3, 1869,) or within two years from the date of the payment of the tax.

It will be observed that this simply affects the question of the consideration by the Commissioner of claims thus barred, but does not, it is claimed, limit any right of action upon them.

One of my predecessors, Mr. Rollins, in his report for 1868, remarks upon this subject as follows:

The authority vested in the Commissioner of Internal Revenue to refund taxes erroneously collected has been the means of preventing much expensive litigation, and has afforded speedy and inexpensive relief to many persons who have been compelled to pay more than was legally due. While a withdrawal of this authority would be productive of great hardship in many cases, I am satisfied that a statutory limitation of the time within which such claims must be presented would tend to prevent much abuse. When the legality of an assessment is not seriously questioned at the time it is made, the evidence in its support is very apt to disappear with a change in the officers of the district; and it is not then difficult for a skillful attorney to present reasons in support of a claim for refunding such as are hard to be set aside.

I would recommend that the Commissioner be prohibited from considering or allowing any claim not presented within two years from the time the tax was paid; and that all claims be barred in the courts after six years from the date of payment of the tax.

Section 44 of the act of July 20, 1868, should, in my opinion, be amended by making the minimum penalty smaller, such penalty being now a fine of not less than \$1,000, with not less than six months imprisonment. The undue severity of this punishment would seem to be obvious as applied to the offenses of carrying on the business of a retail or wholesale liquor dealer, rectifier, or manufacturer of stills, "without having paid the special tax," in cases wherein no intent to defraud exists, the omission arising from ignorance of the law, or other circumstances not fraudulent, yet constituting no legal excuse under the terms of the section. The practical effect of providing so disproportionate a punishment for these offenses is to discourage complaints, defeat convictions, and induce suspensions of sentence, in many cases in which some reasonable punishment should be enforced, as well to vindicate the law as to secure future compliance with its requirements.

Section 63 of the act of July 13, 1866, (p. 31, of Compilation of 1867,) should be amended to make it apply to cases arising under any internal revenue act. As it is now, it applies only to offenses under that act of 1866, and previous act, to which it was an amendment. I would also recommend that the limitation of amount should be extended from \$300 to \$500, as contained in the parallel provision of the customs laws, (section 11 of act of July 18, 1866, 14 Stat. at Large, p. 180.)

I would call attention to the report of last year in relation to the subject of "direct taxes," and would renew the recommendation of early legislation for the final disposition of all lands which have been acquired and are now owned by the United States under the direct-tax laws.

#### COLLECTORS' ACCOUNTS.

The complaint which has heretofore existed of delay in the settlement of ex-collectors' accounts has been, it is believed, entirely removed by the operation of the regulations of this office now in force.

Prior to April, 1870, it appeared that the accounts of 61 ex-collectors had been closed, which number, however, has since been increased to 434, leaving at the present time 230 accounts still open. Of this number 115 have been placed in the hands of United States attorneys for suit on the bonds of the delinquent collectors, the residue being in course of adjustment at this office.

Respectfully,

J. W. DOUGLASS,  
*Commissioner.*

Hon. GEORGE S. BOUTWELL,  
*Secretary of the Treasury.*

## REPORT OF THE COMPTROLLER OF THE CURRENCY.

OFFICE OF THE COMPTROLLER OF THE CURRENCY,  
Washington, November 10, 1871.

SIR: In compliance with the provisions of section 61 of the National Currency Act, I have the honor to present through you to the Congress of the United States the following report for the year ending September 30, 1871:

Since my last annual report, one hundred and fifty-five National Banks have been organized, making the total number to October 1, eighteen hundred and eighty-six. Of this number, ten banks, to-wit:

The Central National Bank of Baltimore, Maryland;  
The First National Bank of Hightstown, New Jersey;  
The National Security Bank of Philadelphia, Pennsylvania;  
The Keeseville National Bank, New York;  
The Central National Bank of Hightstown, New Jersey;  
The East Chester National Bank of Mount Vernon, New York;  
The Merchant's National Bank of Newark, New Jersey;  
The National Bank of the Commonwealth of Boston, Massachusetts;  
The National Bank of Kutztown, Pennsylvania;  
The Littleton National Bank, New Hampshire,

with an aggregate capital of \$1,960,000, were organized by the surrender and transfer of circulating notes for that purpose by existing National Banks, and did not increase the aggregate of bank circulation.

One hundred and forty-five banks have been organized during the year under the act approved July 12, 1870, providing for the issue of fifty-four millions of additional national bank circulation.

The names of the banks are as follows, to-wit,

	Capital.
The Second National Bank of Lawrence, Kansas .....	\$100,000
The State National Bank of Springfield, Illinois .....	150,000
The German National Bank of Chicago, Illinois .....	250,000
The First National Bank of Palmyra, Missouri .....	100,000
The City National Bank of Selma, Alabama .....	100,000
The Loudoun National Bank of Leesburgh, Virginia .....	50,000
The South Bend National Bank, Indiana .....	100,000
The First National Bank of Lake City, Minnesota .....	50,000
The First National Gold Bank of San Francisco, California. 1,	000,000
The Citizen's National Bank of Charlottesville, Virginia....	100,000
The Merchants' National Bank of Burlington, Iowa .....	100,000
The Hastings National Bank, Michigan .....	50,000
The City National Bank of Chattanooga, Tennessee .....	100,000
The Teutonia National Bank of New Orleans, Louisiana....	200,000
The National Bank of Somerset, Kentucky .....	60,000
The First National Bank of Appleton, Wisconsin .....	50,000
The First National Bank of Santa Fé, New Mexico .....	150,000
The First National Bank of Pleasant Hill, Missouri .....	100,000
The First National Bank of Holly, Michigan .....	50,000
The Merchant's National Bank of Richmond, Virginia .....	200,000
The First National Bank of Lanark, Illinois .....	50,000
The Fayetteville National Bank, North Carolina .....	50,000
The First National Bank of Sioux City, Iowa .....	100,000
The First National Bank of Charlotte, Michigan .....	50,000
The First National Bank of Franklin, Kentucky .....	100,000
The First National Bank of Niles, Michigan .....	100,000

	Capital.
<b>The Washington National Bank, Iowa</b> .....	\$50,000
<b>The First National Bank of Fort Scott, Kansas</b> .....	50,000
<b>The First National Bank of Mason, Michigan</b> .....	80,000
<b>The Central National Bank of Columbia, South Carolina</b> ...	100,000
<b>The Citizen's National Bank of Raleigh, North Carolina</b> ....	100,000
<b>The First National Bank of Springfield, Kentucky</b> .....	150,000
<b>The First National Bank of Saginaw, Michigan</b> .....	100,000
<b>The Commercial National Bank of Petersburg, Virginia</b> ...	120,000
<b>The Boone County National Bank of Columbia, Missouri</b> ...	100,000
<b>The First National Bank of Boscobel, Wisconsin</b> .....	50,000
<b>The First National Bank of Seneca, Illinois</b> .....	50,000
<b>The State National Bank of New Orleans, Louisiana</b> .....	500,000
<b>The Gallatin National Bank of Shawneetown, Illinois</b> .....	250,000
<b>The First National Bank of Osceola, Iowa</b> .....	50,000
<b>The National Bank of Jefferson, Texas</b> .....	100,000
<b>The New Orleans National Bank, Louisiana</b> .....	200,000
<b>The Farmers and Merchants' National Bank of Vandalia, Illinois</b> .....	100,000
<b>The Citizens' National Bank of Flint, Michigan</b> .....	50,000
<b>The Merchants and Farmers' National Bank of Charlotte, North Carolina</b> .....	150,000
<b>The Winona Deposit National Bank, Minnesota</b> .....	100,000
<b>The Lumbermen's National Bank of Stillwater, Minnesota</b> ..	50,000
<b>The Bellefontaine National Bank, Ohio</b> .....	100,000
<b>The First National Bank of Kewanee, Illinois</b> .....	75,000
<b>The First National Bank of Sigourney, Iowa</b> .....	50,000
<b>The Union National Bank of Oshkosh, Wisconsin</b> .....	100,000
<b>The Merchants' National Bank of Dayton, Ohio</b> .....	200,000
<b>The First National Bank of St. Clair, Michigan</b> .....	100,000
<b>The Madison National Bank of Richmond, Kentucky</b> .....	200,000
<b>The Farmers' National Bank of Bushnell, Illinois</b> .....	50,000
<b>The Union National Bank of Anrora, Illinois</b> .....	125,000
<b>The First National Bank of Kankakee, Illinois</b> .....	50,000
<b>The First National Bank of Saint Peter, Minnesota</b> .....	50,000
<b>The First National Bank of Charleston, West Virginia</b> ....	75,000
<b>The Union National Bank of New Orleans, Louisiana</b> .....	600,000
<b>The First National Bank of Lincoln, Nebraska</b> .....	50,000
<b>The First National Bank of Albia, Iowa</b> .....	50,000
<b>The First National Bank of Cheyenne, Wyoming Territory</b> ..	100,000
<b>The Commercial National Bank of Dubuque, Iowa</b> .....	100,000
<b>The Manufacturers' National Bank of Racine, Wisconsin</b> ...	100,000
<b>The First National Bank of Paris, Missouri</b> .....	100,000
<b>The National Bank of Chester, South Carolina</b> .....	50,000
<b>The Farmers' National Bank of Keithsburg, Illinois</b> .....	50,000
<b>The Exchange National Bank of Polo, Illinois</b> .....	60,000
<b>The First National Bank of Harrodsburgh, Kentucky</b> .....	100,000
<b>The First National Bank of Lewistown, Illinois</b> .....	50,000
<b>The First National Bank of Jefferson City, Missouri</b> .....	75,000
<b>The First National Bank of Charles City, Iowa</b> .....	50,000
<b>The First National Bank of Indianola, Iowa</b> .....	50,000
<b>The First National Bank of Cassopolis, Michigan</b> .....	50,000
<b>The First National Bank of Anamosa, Iowa</b> .....	50,000
<b>The First National Bank of Montgomery, Alabama</b> .....	100,000
<b>The First National Bank of Elkader, Iowa</b> .....	50,000
<b>The Rockford National Bank, Illinois</b> .....	100,000

	Capital.
The National Commercial Bank of Mobile, Alabama.....	\$208, 000
The National Bank of Commerce of Green Bay, Wisconsin.	100, 000
The Manufacturers' National Bank of Appleton, Wisconsin.	50, 000
The People's National Bank of Winchester, Illinois.....	75, 000
The Gainesville National Bank, Alabama .....	100, 000
The First National Bank of South Haven, Michigan.....	50, 000
The Farmers' National Bank of Salem, Virginia.....	50, 000
The New Orleans National Banking Association, Louisiana.	600, 000
The Union City National Bank, Michigan.....	50, 000
The First National Bank of Olathe, Kansas .....	50, 000
The First National Bank of Allegan, Michigan.....	50, 000
The First National Bank of St. Anthony, Minnesota.....	50, 000
The First National Bank of Nicholasville, Kentucky.....	65, 000
The Northern National Bank of Big Rapids, Michigan.....	75, 000
The First National Bank of Pueblo, Colorado Territory.....	75, 000
The National Bank of Franklin Tennessee .....	60, 000
The Commercial National Bank of Versailles, Kentucky....	100, 000
The First National Bank of Atlantic, Iowa.....	50, 000
The Livingston County National Bank of Pontiac, Illinois..	50, 000
The First National Bank of Baxter Springs, Kansas.....	50, 000
The First National Bank of La Grange, Missouri .....	50, 000
The First National Bank of Wyandott, Kansas.....	50, 000
The First National Bank of Greenville, Illinois.. .....	100, 000
The Second National Bank of Winona, Minnesota.....	100, 000
The Bates County National Bank of Butler, Missouri.....	50, 000
The National Bank of Newberry, South Carolina.....	50, 000
The Cook County National Bank of Chicago, Illinois.....	300, 000
The First National Bank of Brownville, Nebraska.....	100, 000
The German National Bank of Covington, Kentucky.....	250, 000
The National Bank of Spartanburgh, South Carolina.....	60, 000
The First National Bank of Grand Haven, Michigan.....	100, 000
The First National Bank of Mason City, Illinois.....	50, 000
The Second National Bank of Charleston, Illinois.....	100, 000
The First National Bank of Marseilles, Illinois.....	50, 000
The First National Bank of Tuscaloosa, Alabama.....	50, 000
The First National Bank of Frankfort, Indiana.....	100, 000
The Nebraska City National Bank, Nebraska.....	100, 000
The First National Bank of Warrensburgh, Missouri.....	50, 000
The First National Bank of Port Huron, Michigan.....	100, 000
The Valley National Bank of St. Louis, Missouri .....	250, 000
The Covington City National Bank, Kentucky.....	300, 000
The National Exchange Bank of Augusta, Georgia.....	250, 000
The First National Bank of Newnan, Georgia.....	125, 000
The Mills County National Bank of Glenwood, Iowa.....	65, 000
The Citizens' National Bank of Faribault, Minnesota.....	80, 000
The First National Bank of Paola, Kansas.....	50, 000
The National Bank of Rolla, Missouri .....	100, 000
The First National Bank of St. Joseph, Michigan.....	50, 000
The National Bank of Illinois, at Chicago, Illinois.....	500, 000
The First National Bank of Jefferson, at Charlestown, West Virginia .....	50, 000
The Rush County National Bank of Rushville, Indiana.....	100, 000
The First National Bank of Marengo, Illinois .....	50, 000
The Knoxville National Bank, Iowa .....	100, 000
The Union National Bank of Macomb, Illinois.....	00, 000



	Capital.
<b>The First National Bank of Vincennes, Indiana.....</b>	<b>\$100,000</b>
<b>The First National Bank of Webster City, Iowa.....</b>	<b>50,000</b>
<b>The First National Bank of Paxton, Illinois.....</b>	<b>50,000</b>
<b>The First National Bank of Knobnoster, Missouri.....</b>	<b>50,000</b>
<b>The Meridian National Bank of Indianapolis, Indiana.....</b>	<b>200,000</b>
<b>The Citizens' National Bank of Peru, Indiana.....</b>	<b>100,000</b>
<b>The First National Bank of Tama City, Iowa.....</b>	<b>50,000</b>
<b>The Dixon National Bank, Illinois.....</b>	<b>100,000</b>
<b>The Will County National Bank of Joliet, Illinois.....</b>	<b>100,000</b>
<b>The National Bank of Piedmont, West Virginia.....</b>	<b>50,000</b>
<b>The Wellsburgh National Bank, West Virginia.....</b>	<b>100,000</b>
<b>The Citizens' National Bank of Niles, Michigan.....</b>	<b>50,000</b>

The aggregate capital of the banks named is \$15,996,000, and is distributed among the several States as follows:

	Capital.
<b>Alabama, 5 banks.....</b>	<b>\$558,000</b>
<b>Colorado, 1 bank.....</b>	<b>50,000</b>
<b>California, (gold,) 1 bank.....</b>	<b>1,000,000</b>
<b>Georgia, 2 banks.....</b>	<b>375,000</b>
<b>Illinois, 27 banks.....</b>	<b>2,995,000</b>
<b>Iowa, 16 banks.....</b>	<b>1,015,000</b>
<b>Indiana, 6 banks.....</b>	<b>700,000</b>
<b>Kansas, 6 banks.....</b>	<b>350,000</b>
<b>Kentucky, 9 banks.....</b>	<b>1,325,000</b>
<b>Louisiana, 5 banks.....</b>	<b>2,100,000</b>
<b>Missouri, 11 banks.....</b>	<b>1,025,000</b>
<b>Minnesota, 7 banks.....</b>	<b>480,000</b>
<b>Michigan, 17 banks.....</b>	<b>1,155,000</b>
<b>Nebraska, 3 banks.....</b>	<b>250,000</b>
<b>North Carolina, 3 banks.....</b>	<b>300,000</b>
<b>New Mexico, 1 bank.....</b>	<b>150,000</b>
<b>Ohio, 2 banks.....</b>	<b>300,000</b>
<b>South Carolina, 4 banks.....</b>	<b>260,000</b>
<b>Tennessee, 2 banks.....</b>	<b>160,000</b>
<b>Texas, 1 bank.....</b>	<b>100,000</b>
<b>Virginia, 5 banks.....</b>	<b>520,000</b>
<b>West Virginia, 3 banks.....</b>	<b>278,000</b>
<b>Wyoming Territory, 1 bank.....</b>	<b>100,000</b>
<b>Wisconsin, 6 banks.....</b>	<b>450,000</b>

The total amount of currency issued under the act of July 12, 1870, to October 1, 1871, is \$22,333,900, some \$20,000,000 of which has been furnished to new banks, and the remainder to existing banks which had not received their full quota, or which had increased their capital to meet the growing demands of business.

The condition of the Southern States since the passage of the act has been such as to preclude the possibility of their taking any considerable portion of the circulation provided, and consequently the number of banks organized in the South is small. This fact made it possible, after the expiration of the year specified in section one of the act of July 12, 1870, to organize additional banks in the Western States, and accordingly nearly all of the really meritorious applications in those States were granted. I estimate that the Western and Northwestern States can be fully supplied and still leave from \$20,000,000 to \$25,000,000 for the Southern States when they are in condition to take it.

In New Orleans a disposition has been manifested to adopt the national banking system generally, and while but two new banks have been organized there, three of the old banks have reorganized as national banks, and it is understood that several others are contemplating a similar change. One obstacle in the way of such changes is the limitation fixed by the act to the amount of circulation that can be furnished to any one bank, to wit, \$500,000. Quite a number of the New Orleans State banks employ a very much larger capital, and could advantageously employ a much larger circulation. The propriety of removing this restriction in certain cases is respectfully suggested.

Since my last report but one bank has been established on a gold basis—the First National Gold Bank of San Francisco—with a capital of \$1,000,000. It is presumed that the success of this institution is not so flattering as to induce the organization of others of a similar character, though, in view of the obstacles and the opposition which it meets, it holds its own and is gradually winning its way into public confidence.

The tenacity with which the Pacific States adhere to a gold currency is quite notable. Whether it is equally praiseworthy, is another thing. It is not clear that those States derive any substantial benefit from the course they have pursued, and it is beginning to be manifest that the United States are not at all benefited by it. The substitution of a paper currency in California and the other gold-producing States for their present hard money would probably set free for the use of the Government and the whole country some thirty or forty millions of gold, and at the same time provide those communities with a more economical, active, and accommodating circulating medium.

I recommend that provision be made for the establishment of national banks in California and the other Pacific States upon a legal-tender basis, and that the law be so modified as to enable them to cope successfully with other banking institutions at present doing business in those States.

There is nothing especial to note in the history or management of the banks during the year. A few cases of dishonesty have occurred, but none of any magnitude. The examinations made under the provisions of section 54 of the currency act have been instrumental in developing irregular and dishonest practices in time to prevent loss to the bank in quite a number of cases, and there is no doubt of their efficacy in securing judicious management and general compliance with all the important requirements of the act.

Occasional complaint is made that national banks are in the habit of charging higher rates of interest than the laws of the several States authorize, but as the law itself provides a remedy or a penalty for usury, and places it at the disposal of the complainant, I have not felt called upon to take any official action on the subject. While nothing will justify a bank for violating any provision of law, I desire, nevertheless, to call the attention of Congress again to the very high rates of taxation that are imposed on national banks in most of the States. It is asserted by bank officers, and admitted to be true, that local taxation is so high in some of the States as to make it impossible to lend money at legal rates without loss to the bank. It is probably true that, in some instances, the object of the legislature in imposing these burdens is a hostile one, intended to drive national banks out of existence, while, in other cases, onerous taxes are imposed under the impression that the banks are making enormous profits, and can afford to divide them with the State. I am of opinion that the public good would justify some limitation to the power of the States to tax the shares of national banks.

The average tax paid to the United States is  $2\frac{1}{2}$  per cent. on the capital of the banks, and it seems to me that the equivalent of this tax ought to be sufficient for the States in which the banks are located.

I recommend that the Comptroller of the Currency be clothed with power to act in cases where the capital of a bank has been seriously impaired by losses or otherwise, either by requiring the capital to be made whole by assessment of the shareholders, or by requiring the bank to wind up its affairs within a reasonable time if its capital is not made good. Also to wind up the affairs of any bank which is not engaged in the transaction of a legitimate and reputable business, or which has obtained an organization through false or fraudulent representations.

I think it would have a tendency to check the circulation of counterfeit notes, if national banks were required to stamp all such notes, when presented at the counter of the bank, with the word "counterfeit," and I suggest the expediency of legislative provision for that purpose.

The circulation furnished to national banks has now been outstanding for an average period of about five years, and it is being returned in constantly increasing amounts for new notes. Since the organization of the Bureau to September 30, the total amount returned for destruction is \$54,546,345, of which \$23,948,827 were returned during the last year. The handling of these notes involves much care and labor, and requires an addition to the present available force of the office.

Carefully prepared tables will be found in the appendix, as follows:

1st. The number of banks, amount of capital, bonds, and circulation in each State and Territory.

2d. The number and amount of each denomination of bank-notes issued, redeemed, and outstanding.

3d. The number and amount of each denomination of gold bank-notes issued and outstanding.

4th. Statement of amount and different kinds of bonds held to secure circulation.

5th. Banks in the hands of receivers.

6th. National banks in liquidation which have deposited lawful money to redeem their circulation, and taken up their bonds.

7th. National banks in liquidation for the purpose of consolidating with other banks.

8th. Reserve tables.

9th. List of clerks employed during the fiscal year ending June 30, 1871.

10th. Expenditures for the fiscal year ending June 30, 1871.

#### SPECIE PAYMENTS.

The time when, and the means by which, specie payments may be resumed have for some years been the subject of much anxious consideration and of earnest public discussion. The problem is one of general and pervading interest, closely connected with the public welfare, and, like all questions of public importance, has called forth a great variety of opinions. Writers who have made a study of this and kindred branches of political economy, with few exceptions, agree that when in time of suspension of specie payments there has been a very considerable increase of paper money, there must be a corresponding decrease before specie payments can be safely resumed.

Assuming the paper currency to be redundant, or in excess of the normal demands of trade, the excess must be retired in order to bring

the currency up to a specie standard. This redundancy has been attributed to the currency of the United States by a majority of those who have written and spoken on the subject since the year 1864, and the remedy prescribed has been "contraction."

So prevalent was this view of the case at one time that, in 1866, Congress, in obedience to what was regarded as a sound and correct principle of political economy, provided by law for a gradual withdrawal and cancellation of United States notes to the extent of four millions a month; but, owing to the funding operations of the Treasury, this provision was not carried into effect until the latter part of the year 1867, when the process of contraction was commenced. Just at this time, also, commenced a stringency in the money market, which increased in severity as contraction went on. To the people the stringency seemed to be produced by the contraction, though it is now evident that other causes conspired to aid in producing the result. The hard times, however, were generally attributed to the depletion of the money markets by the actual withdrawal of ten millions of currency in six months, and its continued reduction at the rate of four millions per month thereafter.

This opinion had all the force of conviction in the public mind, and found its appropriate expression in an act of Congress, which became a law, in February, 1868, prohibiting any further reduction of the currency, and so the matter now stands. If there is a superabundance of currency, which must be retired before a specie basis can be reached, the first step toward specie payments must be the repeal of the act of February, 1868. If public sentiment will not permit or sanction such action by Congress, it will be because the people do not wish for resumption at the expense of contraction. If this is the only road to specie payments, it remains closed by the mandate of the people.

In direct antagonism to the demand for specie payments at all hazards, and without regard to consequences, is the doctrine of a currency permanently divorced from a specie basis. It is argued, and with some degree of plausibility, that the convertibility of paper money into coin on demand, has always been an unsound element of currency, because it has never been practicable when actually required. Under any system of currency of which credit forms a part, convertibility is but little more than a name, satisfactory enough as long as the times are easy and confidence prevails, but exceedingly dangerous and mischievous when the money market is deranged, and distrust has taken the place of confidence. The conversion of paper is seldom demanded in any considerable amounts until credit is wavering, and everything is looked upon with suspicion. Then, the demand is not limited to the 25 or 30 per cent. which the banks may have in reserve. Loss of confidence, and the knowledge that provision for payment is only partial, are precursors of panics, suspensions, failures, and all the disasters incident to such a state of affairs. It is a maxim in military science that a line of fortifications is just as strong as the weakest place in it, and no stronger. So, in finance, a system is never safe that is vulnerable at any point, or under any circumstances. Panics are the weak places in all theories or systems of convertible currencies, of which credit forms a constituent element.

Absolute convertibility can be secured only by locking up the specie; and for each dollar under lock and key, issuing a paper promise to pay a dollar on demand. In this case the note is only the title to the thing, and there should not be more titles than there are things; in other words, there must not be more paper dollars than there are specie dollars. The

convertibility hobby has been ridden to death. The uniform failure of all attempts to secure it should admonish bankers and financiers that there may be such a thing as progress and improvement even in banking and currency. The Bank of England may be regarded as furnishing the conditions most favorable to the convertibility theory, yet in every time of real need its charter has been disregarded, and the bank has been obliged to suspend. The history of the banks in the United States is but a series of suspensions, occurring as often as conversion was demanded.

Ultimate solvency is of far greater importance to the community than convertibility, and the liberal and judicious use of credit is of far more value in the commercial world than the instant command of gold and silver. Credit is the great element of modern progress. Notwithstanding the abuses to which it has been subjected, it has rejuvenated the world. The prosperity of the United States is, in great measure, due to this life-giving power. Currency based on actual deposits of coin would have given no opportunity for enterprise, no room for growth. Heterogeneous as the currency of this country has been, false and delusive as its promises have proved, yet the element of credit which has entered so largely into its composition has proved an inestimable benefit. Specie has not been at the bottom of this prosperity, for we have had but little of it, comparatively, and whenever the demand has been made for the redemption of currency, the banks have been obliged to suspend. We owe our welfare and progress to the liberal, and not always judicious, use of credit, more than to anything else. And particularly is this true of the last six or eight years. During that period we have had a currency based exclusively upon credit. It has held out no false promise; and, as a consequence, we have been exempt from all currency panics or disturbances.

Those who favor the views herein expressed, maintain and believe that our currency system, as at present established, is the best and safest we have ever had. They believe that the premium on gold may be gradually reduced in the next few years, as it has been in the past, until it shall become practicable to obtain coin for paper, in such reasonable amounts as may be required in trade *by exchange* at rates merely nominal. They make a distinction between "convertibility by redemption," which is the generally accepted idea, and convertibility by exchange, which is their idea. This, they affirm, would bring all the benefits of redemption, without any of its attendant dangers. The plan involves the recognition of bullion dealers, who shall be entitled to regular and legitimate commissions, premiums, or profits. The assent of the public to this proposition relieves the banks and the Government from the necessity and the burden of furnishing coin for nothing. Trade would soon adapt itself to this basis, would calculate and allow these premiums or commissions, and would take out of our system a dangerous, unnecessary, and delusive element.

A theory which has found much favor in the last few years, is embodied in the proposition that "the currency should be maintained at its present volume until the industrial and commercial interests of the country shall recover from the effects of the war, and until the natural growth in population and wealth, the revival of enterprise, the increased facilities of trade, and the expansion of our borders, shall create a legitimate use for the whole amount of currency now outstanding." Just how long this will take has not been stated, and probably is not susceptible of demonstration; but the idea is a plausible one, and commends itself to popular

favor, as affording an easy and gradual transition to specie payments without any of the inconveniences and hardships associated in the public mind with contraction.

The fundamental idea underlying this theory is that the conditions necessary to growth exist already. It presupposes that the country may prosper; that trade, industry, and enterprise may flourish; that labor may have a bountiful reward; that individuals and communities may grow rich and increase in wealth and substance, notwithstanding a superabundant, irredeemable, depreciated currency. If this assumption is correct, it is hardly necessary to look forward to the time when natural growth shall absorb the surplus currency, and specie payments shall come in the course of nature.

If the currency, in its present condition, is so far conducive to prosperity as to make it probable that, at no distant day, the country will actually need all the paper currency now in circulation, the inference would go far toward destroying the force of the usual arguments in favor of early resumption, as it would establish the fact that specie payments are not essential to the growth and prosperity of the country. If the assumption is not correct, the whole proposition fails; for without growth and increase in resources and trade, the currency would forever remain in excess.

Granting, however, that the business of the country is likely to attain such dimensions as to require the entire present volume of currency for its accommodation, there is another aspect of the case to be considered. When the point is reached at which the currency ceases to be redundant, the supposition is that it will rapidly appreciate to par with gold, and that gold will then resume its functions as currency. When this takes place, one of two things is likely to occur: There must be a very considerable inflation, in consequence of the addition of gold and silver to the currency, or there must be a reduction in the volume of paper money. In other words, if there shall not be inflation, there must be contraction; but it will be contraction as a consequence, not as a cause; contraction brought about by natural and self-acting causes, not by act of Congress, nor by the exercise of arbitrary power in any quarter. This would be a legitimate result, and, if it should take place, would not be liable to the same objections that are urged against contraction now.

But whether the coin shall be added to the paper, and so swell the volume of currency and produce inflation, or whether a proportion of the paper shall be retired, as the coin comes forth to take its place as a constituent part of the currency, the probabilities seem to be that, with a wise administration of the finances, paper and specie will gradually and surely, though perhaps slowly, approximate to an equality in value.

If it were possible, in considering the practicability of resumption, to distinguish between circulation and deposits, making the former payable in specie, while the latter should be payable in kind, much of the difficulty and danger attendant on a return to specie payments would be removed.

Although the legal obligation to pay coin or lawful money for deposits, in the absence of any stipulation on the subject, is not disputed, yet it is probable that the banks, by concerted action, would have no difficulty in arranging with their customers to receive for their deposits the same kind of money deposited. This understanding is quite general between the banks and their customers, outside of two or three of the large eastern cities. If the banks in those cities would agree to settle their balances, through their clearing houses, in current funds, much of

the difficulty of making deposits likewise payable in current funds would be obviated. Ordinarily those very banks pay all deposits in miscellaneous funds, and the obligation to pay specie or lawful money only recurs to plague them when they are least able to meet the demand.

It would be practicable to place the currency on a specie basis long before it would be possible to place the entire demand liabilities of the banks on a similar footing. In New York, provision could easily be made for thirty-four millions of bank notes; but, according to established usage there, specie payments would involve provision for over \$200,000,000 deposits. It is this practice which renders the finances of the country so unsteady and unreliable, to wit, the false principles which underlie the financial management of the great centers of money and trade.

If New York cannot maintain specie payments according to her own standard, they cannot be maintained successfully elsewhere for any length of time under any circumstances, and hence it is a matter of vital importance to the country at large to scrutinize carefully, not only the grounds upon which this assumed obligation is based, but also the ability of the parties to carry it into practical effect. During the last five years there have been no apprehensions in any quarter of a currency panic. That element of disaster has happily been wanting in the disturbances which have characterized the money market from time to time; and yet it is an admitted fact that we have more than once been upon the verge of a panic which threatened the most disastrous consequences. There have been not less than three occasions during the last five years in which, if the New York banks had been paying specie, according to their interpretation of specie payments, they would have been obliged to suspend from inability to pay, not their circulating notes, but their deposits; and this at a time when specie payments, if they had prevailed throughout the country, could have been maintained at every other point, as far as the currency was concerned.

To the people the establishment of the currency on a sound and solvent basis is the one important thing. It makes but little difference to them whether depositors in the large cities are entitled to receive specie for deposits made in currency. This is not a vital point in public estimation, and it may safely be left to private contract, as many other equally important questions are. The inquiry recurs, then, conceding the desirability of resuming specie payments, must all efforts in that direction be retarded and imperiled by the undertaking of a few banks, few in number, but powerful by virtue of their central position, to place deposits upon the same basis? If any substantial interest were sacrificed, or any valuable principle violated, by the abandonment of this dogma, there might be some reason for taking the risk; but if deposits could be made payable in kind, that is, in current funds, lawful money, or gold, as the case might be, the depositor could have no just ground of complaint, while one great obstacle to the resumption and maintenance of specie payments would be removed.

In the solution of these questions lies one of the most important problems of the day; but, in view of the various theories advanced, it seems probable that the true solution will come only with time.

The doctrine of contraction as a means to an end for the purpose of hastening a return to specie payments, has been condemned by the people. It has been tried and rejected, and may be considered as abandoned.

The proposition to wait until the business of the country shall expand

to such an extent as to require the whole volume of paper money in circulation, involves no immediate action, meets the views of the public more fully than any other plan, and is probably safer than any scheme which requires legislative interference.

It is also very evident that the undertaking, heretofore considered, to place the entire currency debt of the country on a specie basis, by the payment of deposits in coin, would be an unwise and mischievous thing, a vain and futile attempt, which would lead to panics and failures in the future as in the past. If specie payments are to be resumed, let the effort be concentrated upon the currency, and leave deposits and all other currency debts to be adjusted by private contract. As the first step in this direction, the associated banks in all cities should be required to settle balances, through their clearing-houses, in current funds.

The discrediting of national-bank currency, which is the consequence of their present regulations in this respect, is unwise and injurious, and creates a distinction between bank currency and lawful money which is unnecessary and which ought not to exist.

It would be a wise measure to provide for the extension of the national banking system wherever capital and trade may invite, withdrawing, if it should seem desirable, United States notes, as fast as bank-notes are issued.

A well-managed national bank, with a *bona fide* paid-up capital, is not a dangerous institution in any community. A deliberate, legitimate investment of capital in banking by men who, in a majority of cases, have had the sagacity, the enterprise, and the prudence to make their own money, men who are usually the most reliable members of society, can hardly be considered unwise, certainly not injurious to the interests of the people in whose midst it is made.

A national bank affords a safe place for the deposit of all the little hoards and savings which otherwise would be unemployed. It aggregates these into a fund which becomes useful and powerful in stimulating trade and enterprise.

There is reason to believe that the national banks organized during the last year in places previously without banking facilities have had no little instrumentality in helping to bear the strain that comes with every autumn. They have paid out in their several localities the currency furnished to them, while they have called out and utilized for the public good large sums of money previously distributed among and held by the people in small amounts; and in this they have contributed to the annual supply of money required in the West, and which otherwise would have been drawn from the eastern cities.

I therefore do not hesitate to recommend that provision be made for the organization of national banks wherever they may be needed.

If, with each million of bank-notes issued, a million of legal-tenders is withdrawn, the time will come when the circulation to be redeemed will be so much larger in proportion than the funds for its redemption, that the latter must appreciate in value, while the enhanced cost of redemption will be a wholesome check upon bank issues.

If free banking is made practicable upon the basis suggested, any further increase or inflation of the currency will be rendered impossible, and every hundred thousand dollars of bank-notes so issued will have a tendency to accelerate the resumption of specie payments, while, at the same time, it will make the process gradual, and throw the responsibility and the burden upon the banks and the capital of the countrys where they legitimately belong. These are agencies which can tell



with unerring certainty when and how to act, and the precise moment when it will be safe and wise to re-establish the business and finance, of the country on a specie basis.

Respectfully submitted.

HILAND R. HULBURD,  
*Comptroller of the Currency.*

HON. GEO. S. BOUTWELL,  
*Secretary of the Treasury.*

## REPORT OF THE FIRST COMPTROLLER OF THE TREASURY.

TREASURY DEPARTMENT,  
*First Comptroller's Office, October 27, 1871.*

SIR: I have the honor to submit the following report of the operations of this office during the fiscal year ending June 30, 1871.

Number of warrants countersigned, entered upon blotters, and posted in ledgers, viz:

Treasury, proper .....	1,691
Public debt .....	245
Quarterly salary .....	1,398
Diplomatic .....	2,296
Customs .....	3,876
Internal revenue .....	5,941
Judiciary .....	1,703
War, civil .....	42
War, pay .....	3,642
War, repay .....	1,143
Navy, pay .....	1,390
Navy, repay .....	233
Interior, civil .....	1,797
Interior, pay .....	1,680
Interior, repay .....	54
Appropriation .....	148
Internal revenue, (covering) .....	3,086
Customs, (covering) .....	1,549
Land, (covering) .....	591
Miscellaneous, (covering) .....	4,504

Number of accounts received from the First and Fifth Auditors of the Treasury, and Commissioner of the General Land Office, revised and certified, viz:

<i>Judiciary</i> , embracing the accounts of United States marshals for their fees, and for the expenses of the United States courts, of the United States district attorneys, and of the commissioners and clerks of United States courts. ....	1,718
<i>Diplomatic and consular</i> , embracing the accounts arising from our intercourse with foreign nations, expenses of consuls for sick and disabled seamen, and of our commercial agents in foreign countries .....	1,910
<i>Public lands</i> , embracing the accounts of the registers and receivers of land offices, and surveyors general and their deputies, and of lands erroneously sold .....	2,589
<i>Steamboats</i> , embracing the accounts for the expenses of the inspection of steamboats, and salaries of inspectors .....	575
<i>Mint and its branches</i> , embracing accounts of gold, silver, and cent coinage, of bullion, of salaries of the officers and of the expenses .....	125
<i>Public Debt</i> , embracing accounts of the United States Treasurer, and the Assistant Treasurer's accounts, for the redemption of United States stocks and notes, and for payment of interest on the public debt .....	781
<i>Public printing</i> , embracing accounts for printing, for binding, and for paper ....	72
<i>Territorial printing</i> , embracing accounts for printing, binding, and paper for the legislatures of the several Territories .....	14

<i>Territorial</i> , embracing accounts for the legislative expenses of the several Territories, and the incidental expenses of their government.....	354
<i>Congressional</i> , embracing accounts for contingent expenses, &c., of the United States Senate and House of Representatives.....	110
<i>Collectors of internal revenue</i> , embracing their accounts of the revenue collected, accounts for expenses of collecting the same, and accounts for their salaries and commissions, and the expenses of their offices.....	3,952
<i>Assessors of internal revenue</i> , embracing accounts for their commissions and the expenses of levying the taxes.....	1,212
<i>Miscellaneous, internal revenue</i> , embracing accounts for salaries and expenses of supervisors, drawbacks, informers, &c.....	2,081
<i>Stamp agents</i> , embracing accounts for the sale of internal revenue stamps.....	1,646
<i>Miscellaneous</i> , embracing accounts for the contingent expenses of the executive departments at Washington, salaries of judges, marshals, district attorneys, &c.....	1,834
Number of letters written on official business.....	9,385
Number of receipts of collectors of internal revenue for tax-lists examined, registered, and filed.....	2,863
Number of official bonds examined, registered, and filed.....	1,169
Number of requisitions examined, entered, and reported, viz: *	
Diplomatic and consular.....	776
United States marshals.....	210
Collectors of internal revenue.....	2,897

The Comptroller deems it unnecessary to give in this report a statement of the revenues received and the disbursements made, inasmuch as the records of the Secretary's office correspond with those of the Comptroller's, and the financial report will present the same figures and results as would be presented by this office.

The foregoing statement of the labor performed in the office shows that there has not been any reduction in its amount, and that it remains as large as in former years, and requires that the force should be continued.

I am, sir, very respectfully, your obedient servant,

R. W. TAYLER,  
Comptroller.

Hon. GEORGE S. BOUTWELL,  
Secretary of the Treasury.

## REPORT OF SECOND COMPTROLLER OF THE TREASURY.

TREASURY DEPARTMENT,  
Second Comptroller's Office, September 30, 1871.

SIR: I have the honor to submit the following detailed statement of the business operations of this office for the fiscal year ending June 30, 1871:

The aggregate number of accounts of disbursing officers and agents which have been received, as well as those which have been finally adjusted, is as follows:

	Received.	Revised.	Amount.
From the Second Auditor.....	3,639	4,066	\$198,440,896
From the Third Auditor.....	3,748	3,829	203,053,053
From the Fourth Auditor.....	672	684	27,448,171
Total.....	8,059	8,579	431,840,120

The above accounts have been duly entered, revised, and the balance found thereon certified to the Secretary of the Department in which the

expenditure has been incurred, viz: those from the Second and Third Auditors to the Secretary of War, (excepting the accounts of Indian agents, which are certified to the Secretary of the Interior,) and those from the Fourth Auditor to the Secretary of the Navy.

Character of accounts.	Received.	Revised.	Amount.
<b>FROM THE SECOND AUDITOR.</b>			
Embracing accounts of disbursing officers of the War Department for collecting, organizing, and drilling volunteers.	17	17	\$635, 686
Paymasters' accounts, for the pay and rations, &c., of officers and soldiers of the Army.	903	1, 300	176, 005, 331
Special and referred accounts, including National Asylum and arsenals, soldiers' pay, &c.	749	749	2, 237, 739
Accounts of Army recruiting officers, for clothing, equipments, and bounty to recruits, &c.	239	272	967, 865
Ordinance, embracing the accounts of disbursing officers of the Ordnance Department for arsenals, armories, armaments for fortifications, arming militia, &c.	108	109	8, 633, 115
Indian Department.—Accounts of Indian agents, including the pay of Indian annuities, presents to Indians, expenses of holding treaties, pay of interpreters, pay of Indian agents, &c. and the settlement of personal claims for miscellaneous services of agents and others in connection with Indian affairs.	1, 041	1, 037	6, 819, 479
Medical and hospital accounts, including the purchase of medicines, drugs, surgical instruments, hospital stores, the claims of private physicians for services, and surgeons employed under contract.	380	380	1, 132, 447
Contingent expenses of the War Department.	202	202	268, 190
Freedmen's Bureau. Pay and bounty.			1, 736, 944
<b>Total</b>	<b>3, 639</b>	<b>4, 006</b>	<b>198, 446, 696</b>
<b>FROM THE THIRD AUDITOR.</b>			
Quartermasters' accounts, for transportation of the Army, and the transportation of all descriptions of Army supplies, ordnance, and for the settlement of personal claims for services in the Quartermaster's Department.	2, 499	2, 540	132, 755, 986
Commissionary accounts, for rations or subsistence of the Army, and for the settlement of personal claims for services in the Commissionary Department.	977	990	9, 587, 154
Accounts of pension agents, for the payment of military pensions, including the entries of the monthly reports of new pensioners added to the rolls, and the statements from the Commissioner of Pensions respecting the changes arising from deaths, transfers, &c., and for pension claims presented for adjustment.	152	165	34, 768, 120
Accounts of the Engineer Department, for military surveys, the construction of fortifications, for river and harbor surveys and improvements.	87	91	7, 934, 882
Accounts for the relief of freedmen and refugees.	33	43	906, 911
<b>Total</b>	<b>3, 748</b>	<b>3, 729</b>	<b>205, 953, 053</b>
<b>FROM THE FOURTH AUDITOR.</b>			
Quartermasters of the Marine Corps: Embracing accounts for the expenses of officers' quarters, fuel, forage for horses, attendance on courts martial and courts of inquiry, transportation of officers and marine supplies of provisions, clothing, medical stores, and military stores for barracks, and all personal supplies for marines on shore.	4	5	329, 408
Accounts of paymasters of the Marine Corps, for pay and rations of the officers and marines, and servants' hire.	4	5	901, 967
Paymasters of the Navy: Accounts for the pay and rations of the officers and crew of the ship, supplies of provisions, clothing, and repairs of vessels on foreign stations.	346	347	4, 908, 069
Paymasters at navy yards: Accounts for the pay of officers on duty at navy yards or on leave of absence, and the pay of mechanics and laborers employed on the various works.	129	123	13, 071, 773
Navy agents' accounts for their advances to paymasters, purchases of fuel, provisions, clothing, and naval stores.	163	165	7, 744, 831
Navy pension agents' accounts for the payment of pensions of officers and seamen, &c., of the Navy, and officers and privates of the Marine Corps.	35	37	424, 123
<b>Total</b>	<b>672</b>	<b>674</b>	<b>27, 446, 171</b>

<i>Territorial</i> , embracing accounts for the legislative expenses of the several Territories, and the incidental expenses of their government.....	354
<i>Congressional</i> , embracing accounts for contingent expenses, &c., of the United States Senate and House of Representatives.....	110
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<i>Stamp agents</i> , embracing accounts for the sale of internal revenue stamps.....	1,646
<i>Miscellaneous</i> , embracing accounts for the contingent expenses of the executive departments at Washington, salaries of judges, marshals, district attorneys, &c.....	1,834
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I am, sir, very respectfully, your obedient servant,

R. W. TAYLER,  
*Comptroller.*

Hon. GEORGE S. BOUTWELL,  
*Secretary of the Treasury.*

## REPORT OF SECOND COMPTROLLER OF THE TREASURY.

TREASURY DEPARTMENT,  
*Second Comptroller's Office, September 30, 1871.*

SIR: I have the honor to submit the following detailed statement of the business operations of this office for the fiscal year ending June 30, 1871:

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From the Fourth Auditor.....	672	684	27,448,171
Total.....	8,059	8,579	431,840,120

The above accounts have been duly entered, revised, and the balance and thereon certified to the Secretary of the Department in which the

# REPORT OF THE SECRETARY OF THE TREASURY.

65

The number of accounts on hand July 1, 1870, was.....	135
The number of accounts received from First Auditor during year....	6, 013
	<hr/> 6, 148
The number of accounts passed during the year .....	5, 905
The number of accounts returned during the year .....	44
	<hr/> 5, 949
The number of accounts on hand June 30, 1871 .....	199

There was paid into the Treasury of the United States, from sources the accounts of which are settled in this office :

On account of customs .....	\$206, 270, 408 05
On account of fines, penalties, and forfeitures.....	952, 579 86
On account of steamboat inspections .....	223, 823 70
On account of drayage, storage, &c .....	414, 310 61
On account of marine hospital money, (from January 1, 1871) ..	161, 711 46
On account of emolument fees .....	585, 887 69
	<hr/> 208, 608, 721 37

And there was paid out of the Treasury :

On account of expenses of collecting the revenue from customs .....	\$6, 560, 672 61
On account of excess of deposits .....	2, 276, 169 16
On account of debentures .....	945, 441 52
On account of revenue-cutters, construction and maintenance .....	1, 252, 000 31
On account of public buildings.....	1, 350, 133 87
On account of light-houses, construction and maintenance .....	2, 674, 928 08
On account of marine hospital, care of sick seamen .....	437, 493 86
On account of distributive shares of fines.....	488, 135 55
On account of life-saving stations, Long Island and New Jersey .....	37, 740 17
On account of miscellaneous accounts.....	73, 128 00
	<hr/> 16, 095, 843 13

The number of estimates received was .....	2, 157
The number of requisitions issued.....	2, 129
The amount involved in said requisitions .....	\$9, 648, 285, 81
The number of letters received was .....	11, 814
The number of letters written was .....	11, 862
The number of letters recorded was .....	11, 539
The amount involved in this statement .....	\$234, 352, 850 31
The average number of clerks employed.....	26

## CAPTURED AND ABANDONED PROPERTY.

During the past year the business in this division has been very small, having been confined principally to the settlement of accounts for legal services, under act of April 20, 1870, and to the review of work already done, the latter necessitated by the adverse claims of custom agents in settling their accounts.

I append tabular statement of the expenditures out of appropriations, the accounts of which are settled in this office, marked A.

Statement of receipts from fines, penalties, and forfeitures, by districts, as shown by the accounts, so far as they have been received at this office, marked B.

Statement showing the transactions in bonded merchandise, marked C.

Very respectfully, your obedient servant,

W. T. HAINES,  
*Commissioner of Customs.*

Hon. GEORGE S. BOUTWELL,  
*Secretary of the Treasury.*

## REPORT OF THE FIRST AUDITOR OF THE TREASURY.

TREASURY DEPARTMENT,  
*First Auditor's Office, September 18, 1871.*

SIR: I have the honor to submit the following statement of the business transactions of this office for the fiscal year ended June 30, 1871:

Accounts adjusted.	Number of accounts.	Amounts.
<b>RECEIPTS.</b>		
Collectors of customs .....	1,546	\$187,356,571 31
Collectors under steamboat act .....	526	204,619 92
Internal and coastwise intercourse .....	1	26,093 74
Mints and assay offices .....	23	50,765,660 22
Fines, penalties, and forfeitures .....	489	224,623 27
Marine hospital money collected .....	24	2,701 68
Miscellaneous receipts .....	255	57,807 99
	<b>2,864</b>	<b>239,338,078 13</b>
<b>DISBURSEMENTS.</b>		
Collectors as disbursing agents of the Treasury .....	1,194	\$6,029,273 63
Official emoluments of collectors, naval officers, and surveyors .....	857	1,633,091 62
Excess of deposits for unascertained duties .....	122	1,665,653 02
Debentures, drawbacks, bounties, and allowances .....	90	984,215 21
Special examiner of drugs .....	1	417 56
Superintendents of lights .....	446	978,036 87
Agents of marine hospitals .....	507	366,373 01
Accounts for duties illegally exacted, fines remitted, judgments satisfied, and not proceeds of unclaimed merchandise paid .....	1,470	874,927 61
Judiciary accounts .....	1,695	2,694,379 11
Disbursements for revenue-cutters .....	421	1,058,177 64
Redemption of the public debt and the payment of interest thereon .....	643	602,129,163 51
California land claims .....	3	524 75
Inspectors of steam vessels for traveling expenses .....	292	31,307 21
Public printing .....	24	1,112,207 67
Insane Asylum, District of Columbia .....	6	59,350 34
Providence Hospital .....	12	12,000 00
Construction and repair of public buildings .....	800	1,581,182 07
Life-saving stations .....	12	10,976 68
Compensation and mileage of the members of the Senate and House of Representatives .....	1	425,303 59
Contingent expenses of the Senate and House of Representatives and of the several Departments of Government .....	438	3,214,039 04
Mints and assay offices .....	101	50,655,226 92
Territorial accounts .....	80	152,064 13
Captured and abandoned property .....	68	347,383 98
Salaries of the civil list paid directly from the Treasury .....	1,427	612,056 10
Coast Survey .....	19	595,514 23
Disbursing clerks for paying salaries .....	335	5,231,340 03
Fuel, lights &c., for public buildings .....	266	295,201 89
Additional compensation to collectors, &c .....	2	478 49
Treasurer of the United States for general receipts and expenditures .....	6	1,080,837,381 25
Distribution of fines, penalties, and forfeitures .....	154	195,143 82
Commissioner of Public Buildings .....	118	296,409 83
Commissioner of Agriculture .....	30	145,221 05
Warehouse and bond accounts .....	828	
Miscellaneous .....	1,433	2,123,470 20
	<b>14,101</b>	<b>1,773,272,492 06</b>
Reports and certificates recorded .....		11,426
Letters written .....		2,239
Letters recorded .....		2,239
Powers of attorney registered and filed .....		6,856
Acknowledgments of accounts written .....		8,581
Requisitions answered .....		365
Judiciary emolument accounts registered and filed .....		456
<b>Total .....</b>		<b>32,162</b>

As the character of the business of this office has undergone no essential change since my last annual report, I am induced to adopt, in part, *the language and form* of that report, as applicable to this.

The preceding condensed statement of the business of this office gives so imperfect an idea of the amount of work performed, and the large responsibilities involved, that for the better understanding of the diversified character of the business, and its practical working in detail, I submit the following dissection and exhibit, as the most appropriate means of comprehending its importance and measuring its magnitude.

#### CUSTOMS DIVISION.

Returns are now received from 139 districts and ports. These returns are distributed as nearly equal as practicable to thirteen different desks. For the proper examination and adjustment of these accounts clerks are required who have a knowledge of the tariff laws, and are also good practical accountants. The accounts of customs are received and adjusted monthly. These accounts include the duties on imports, and duties on tonnage.

The abstracts of duties on imports in New York, Boston, Philadelphia, and San Francisco, New Orleans, Baltimore, and Portland, are very large, requiring a great amount of patient labor in comparing the entries with the tariff schedules, made up as those schedules are from the various acts of 1861, 1862, and 1864, and the several amendatory acts. In all the smaller districts, which have no naval officer to certify the abstracts, the manifest is forwarded by the collector for each and every entry of merchandise, amounting, in districts like Portland, Vermont, Oswego, Detroit, &c., to hundreds and even thousands in a single month. These must all be examined as to the rate of duty, oath, stamp, &c., and compared with the abstract. After the abstracts are examined and the differences noted, a statement of account is made, and the collector charged with the aggregates and credited by his deposits as shown by the covering warrants.

Marine hospital duties are reported by the collectors, in separate accounts monthly, and adjusted quarterly.

The collectors of customs also render monthly accounts for expenses of collecting the revenue, which are adjusted quarterly. In these accounts are included all payments to inspectors, weighers and gangers, appraisers, revenue boatmen, contingent expenses, salary of collectors, commissions, &c. Vouchers for all these payments must be compared with the lists of appointment for the authority for payment, and examined as to correct computation, oath, &c.

Next comes the account of official emoluments, in which the collector accounts for his fees, &c., and charges his payment for clerk-hire, stationery, office-rent, &c. This account in large ports is rendered monthly, and in small ones quarterly, and adjusted yearly. Separate accounts have also to be stated in many of the districts for excess of deposits refunded, debentures paid, and expenses of the revenue-cutter service. These are received monthly and stated quarterly. In some cases these are very large.

Monthly accounts are also received from nearly all the districts for steamboat fees and fines, penalties, and forfeitures, which are usually adjusted quarterly, and in some cases oftener.

The collectors of customs also act as disbursing agents for expenses of Marine Hospital Establishment and the Light-House Establishment, accounts for which are received monthly and quarterly and stated quarterly.

There are also many special accounts, such as payments for the salaries of janitors, and the distribution of fines and penalties. Also the cases for the refunded duties exacted in excess, tonnage duty refunded, judgment satisfied, &c.

## REPORT OF THE FIRST AUDITOR OF THE TREASURY.

TREASURY DEPARTMENT,  
*First Auditor's Office, September 18, 1871.*

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	<b>2,864</b>	<b>230,338,078 13</b>
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Agents of marine hospitals .....	507	366,373 01
Accounts for duties illegally exacted, fines remitted, judgments satisfied, and not proceeds of unclaimed merchandise paid.....	1,470	874,927 61
Judiciary accounts.....	1,885	2,694,379 11
Disbursements for revenue cutters.....	421	1,058,177 64
Redemption of the public debt and the payment of interest thereon .....	643	802,129,163 51
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Letters written .....		2,239
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Powers of attorney registered and filed.....		6,456
Acknowledgments of accounts written.....		8,581
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## JUDICIARY.

This division is highly important, embracing the adjustment of all judiciary accounts.

First. Accounts of United States marshals for expenses of United States courts, and for their fees for service of process, &c., in all United States cases under the fee bill of February 26, 1853, and amendments thereto. The fee bill of 1853 is general in its application to all States and Territories, but the practice of the courts in the different jurisdictions is not uniform, and hence almost every marshal has his own construction of the fee bill in making charges in his account. To adjust these accounts the closest scrutiny and thorough acquaintance with the usages and decisions of the accounting officers, a familiar acquaintance with their interpretations of the fee bill, as also the practice in the several districts, is essentially necessary. The business in the United States courts has more than doubled since the passage of the internal revenue law, the civil rights bill, and the enforcement act, and as a consequence the accounts of all officers connected with the Federal courts have assumed largely increased proportions in comparison with what they were prior to the rebellion.

Second. Accounts of district attorneys for attendance upon United States courts, and upon commissioners' examinations, for their travel and fees in all United States cases.

Third. Accounts of clerks of United States courts for their attendance, and for fees in all United States cases.

Fourth. Accounts of United States Commissioners for fees, &c.

In the examination and adjustment of all these accounts, it is necessary not only to hold the fee bill in memory, but also to be acquainted with all of the many decisions of the Attorneys General, and of the Secretary of the Interior, and to be able readily to apply the same to any charge that may be presented.

## REDEMPTION AND INTEREST DIVISION.

The settlement of the accounts of the Treasurer of the United States, Assistant Treasurers, United States depositaries, and fiscal agents of the Treasury Department, for the payment of interest on the public debt and the redemption of Government obligations, funded or otherwise, is assigned to this division, and may be designated, in brief, as follows:

*Registered bonds—Interest.*—At the close of the present fiscal year, the amount outstanding of this class of securities, the interest of which is payable in coin, was \$725,772,350, and in currency, being for bonds issued to the Pacific Railroad Companies, \$64,618,832. These accounts, payments of which are made semi-annually upon schedules prepared by the Register of the Treasury, for fiscal agents, are closed and transmitted to this office for settlement within ninety days from the date of payment. In the examination of schedules, the stock being held principally by banking and other corporations, executors, administrators, and trustees of estates, and non-residents of the country, the interest of which is, in most cases, receipted by attorneys, requires careful scrutiny into the authority presented as vouchers for the receipt of dividends, and is often attended with considerable correspondence and consequent delay in the adjustment of these accounts. During the year there were seventy-six coin and twenty-six currency accounts settled, involving, in the aggregate, the sum of \$48,063,987 79, to which may be included as part of the clerical labors of the division, but which does not enter into the statistics of this report, schedules examined, embracing

\$14,487,140 35. The number of powers of attorney and testamentary evidence of the administration of estates, received as vouchers for the receipt of interest, and which have been approved, filed, and registered, and listed for the use of fiscal agents, was six thousand eight hundred and fifty-six.

*Coupon bonds—Interest.* Of this class of securities outstanding at the close of the fiscal year, the interest being payable in coin, and the coupons redeemable semi-annually, amounts to \$1,162,361,400. The rendition of these accounts *weekly* by the principal depositories, and *monthly* by others, and the fact that the several issues and loans have to be kept distinct for entry upon the Register's books, with the amount of interest chargeable to each loan, imposes much additional labor upon the office, the result of which, however, is of material advantage to the Department in keeping the business of its redemptions properly posted for inspection and information. The number of this class of accounts stated was one hundred and fifty-one, amounting to \$77,353,964 69, and containing four million nine hundred and eleven thousand five hundred and sixty-eight vouchers counted and canceled.

*Navy pension fund.*—The amount of this fund upon which the annual interest of three per cent. is paid, amounts to \$14,000,000.

There have been two accounts stated during the year, amounting to \$400,000.

*Redemption of United States stock.*—The amount of certificates of the loans of 1847, 1848, 1860, Texan indemnity, and the loans of 1862, 1864, and 1865, redeemed and canceled, of which accounts have been stated, amounts, including premium and interest, to \$242,253,981 01. Accounts stated, forty-five; vouchers examined, one hundred and one thousand two hundred and seventy-eight.

*Floating debt.*—Currency obligations, consisting of Treasury notes of various issues, certificates of indebtedness; certificates of temporary loan and interest thereon, amount to \$14,657,331 89, embraced in one hundred and thirty-seven accounts, and containing twenty-two thousand six hundred and twenty vouchers.

*United States obligations destroyed.*—consisting of old demand notes, legal-tender notes, fractional and postal currency, and gold certificates—amount to \$219,379,898 18, and the number of vouchers examined, eight hundred and fifty-seven, embraced in two hundred and six accounts.

#### MINT ACCOUNTS AND OTHERS.

This division adjusts the accounts of the Mint of the United States, its branches, (four in number,) and assay office, New York; accounts of the governors and secretaries of the Territories; accounts for defense of suits in the Court of Claims; accounts in relation to captured and abandoned property; and salary accounts of the civil list.

The accounts of the mints and assay office are designated as bullion, ordinary, and medal accounts, and are adjusted quarterly.

The bullion accounts are voluminous, and the examination of the various accounts tedious. The abstracts of deposits, in connection with the warrants of the director or superintendent for payment, are first examined and checked, then the various accounts of the treasurer, melter and refiner, and coiner, under the following heads: "Deposit account," "gold bullion," "silver bullion," "cent bullion," "cent deposit account," "gold coinage," "silver coinage," "cent coinage," "melter and refiner's gold," "melter and refiner's silver," "melter and refiner's cent bullion," "coiner's gold," "coiner's silver," "coiner's five-cent account,"

"coiner's three-cent account," "coiner's bronze or one and two-cent account," "unpaid depositors," "gold coins for assay," "silver coins for assay," "unparted bar account," "silver profit and loss," "cent profit and loss," "bullion deposit profit and loss," "profit and loss," "bullion fund," "balances," and, finally, all of the above are blended in the summary statement. During the last fiscal year there were twenty-one of these accounts adjusted.

The ordinary accounts are for the incidental and contingent expenses, wages of workmen, and salaries of officers and clerks. The medal accounts are for medals manufactured for various institutions throughout the country. The accounts of the governors and secretaries of the Territories are for the contingent expenses of the executive offices, and for compensation and mileage of members, and incidental expenses of the legislative assemblies.

The accounts in relation to captured and abandoned property: These accounts are for moneys received from and disbursements for and on account of captured and abandoned property. This branch of business is drawing to a close, only three accounts received and stated during the year. The accounts for defense of suits in the Court of Claims are for expenses incurred in the defense of suits in relation to captured and abandoned property.

*Salary accounts.*—These are salary certificates for salaries of the Vice-President of the United States, judges of the Supreme Court, United States district judges, United States attorneys and marshals, governors and secretaries of the Territories, commissioners of claims and employés, and the officers and clerks of the United States steamboat inspection service. Some of the above are stated monthly, and others quarterly.

The whole number of accounts adjusted by this division during the year was 1,676.

#### WAREHOUSE AND BOND ACCOUNTS.

The act of March 28, 1854, gives to importers the privilege of storing imported goods in public or private bonded warehouses, under the supervision of customs officers, without payment of duties, for a period not exceeding three years. During this period these goods may be withdrawn at the option of the importer for consumption, on payment of duties, for transportation to other districts and ports, or for exportation out of the country.

Under the title of warehouse and bond accounts, collectors of customs are required to render accounts of all goods so stored in their respective districts, upon which the duties remain due and unpaid, with the same particularity of detail as they account for duties on goods entered for consumption.

These accounts comprise statements and vouchers, not only of all goods entered at any port, and actually placed in bonded warehouses, but also of all goods entered at such port for immediate transportation to other ports in the country, or for immediate exportation to foreign countries; such goods being considered as constructively warehoused. In these accounts are abstracts of all goods withdrawn from warehouse for consumption, transportation to other ports, or exportation to foreign countries. They contain also statements of salt withdrawn from warehouse pursuant to the provisions of the fourth section act July 28, 1866, to be taken on board vessels licensed for the fisheries, under bond, to be used in curing fish. Separate accounts are rendered of all transportation, exportation, and salt bonds taken to cover such with-

**drawals.** Forfeited bonds delivered for prosecution are credited in these accounts to the collector, and charged to the various district attorneys. Rather more than half of the collection districts have transactions and render accounts. The rest are required to send monthly certified statements that there have been no transactions under either of these heads.

#### ACCOUNTS OF THE TREASURER OF THE UNITED STATES.

The magnitude of the statement will convey some idea of the labor performed in the adjustment of the accounts. The accounts of the Treasurer of the United States for the general receipts and expenditures of the Government are made up and rendered quarterly. The account current (a volume of some three hundred pages) has to be carefully compared with a certified account received from the Register, of all warrants drawn on him or in his favor during the quarter, the amount remaining unpaid and outstanding of previous quarters, and the amount of such warrants for which he claims credit as being paid, the amount of balances in the various depositories, &c. All warrants drawn on the Treasurer are paid by drafts, and he cannot receive credit for the payment of a single warrant, unless it is accompanied by its appropriate draft, properly indorsed by the payee. The examination and comparison of these drafts are intricate and laborious.

The internal revenue warrants at this time fully equal one-half of the yearly issue of warrants prior to the rebellion, many of which require the critical examination of from one to over six hundred drafts.

During the fiscal year ending June 30, 1871, six accounts of the Treasurer of the United States have been adjusted, requiring the careful examination of over 80,000 warrants and drafts; the amounts embraced in the settlement of these accounts are, for actual receipts, \$1,024,073,856 29; and, for expenditures, \$1,080,828,090 44.

The mileage and compensation of members of the House of Representatives are paid by the Treasurer on certificates of the Speaker of the House, which are the Treasurer's vouchers, and upon which he receives credit in the adjustment of his account as agent. This account has to be carefully compared with the journal of the Sergeant-at-Arms, who keeps the individual accounts of the members, &c.

The accounts of the Secretary of the Senate as agent for paying the compensation and mileage of Senators, and the contingent expenses of the Senate, are very intricate, owing to the irregular sessions of that body. The amount involved in the accounts adjusted during the fiscal year is \$657,799 39.

#### SALARY ACCOUNTS.

Under this head is embraced the adjustment of the accounts (with two or three exceptions) of disbursing officers for payment of salaries to all persons in the Departments at Washington who receive a regular compensation, with some accounts also for additional clerk hire. These accounts include the pay-rolls of the Treasury, State, War, Navy, Interior, Justice, and Post Office Departments; also the accounts of the Superintendent of Weights and Measures, Clerk of the House of Representatives, Librarian of Congress, Congressional Printer, private secretaries of the President of the United States, salaries, &c., of Metropolitan police, and all the accounts of United States Coast Survey. Under this division of the work of the office is also embraced the settlement of the accounts for salaries in their offices of all United States Assistant Treasurers and United States depositories.

## CONTINGENT ACCOUNTS, ETC.,

includes the contingencies of all the Executive Departments—Treasury, War, Navy, and Interior; contingencies of the House of Representatives under different appropriations; all the accounts of the Department of Agriculture, salaries, distribution of seeds, &c., under different appropriations; all the accounts of the Commissioner of Public Buildings and Grounds, embracing repairs and preservation of all the public works in the city of Washington—about one hundred different appropriations; all the accounts of the disbursing agent for new dome, Capitol extension, enlargement of the Congressional Library, grading the public grounds around the Capitol, &c.; all the accounts of the agent, &c., for the Library of Congress, Botanic Garden, &c.—fourteen appropriations; expense of the national loan; contingent expenses of the Assistant Treasurers of the United States at New York, Boston, New Orleans, Charleston, Denver City, San Francisco, &c.; contingent expenses of the Executive Mansion; contingent expenses of Congressional Printer; accounts for repairs, &c., and for furniture for Treasury Department.

## SEPARATE CLASSIFICATION OF ACCOUNTS.

The accounts settled by this division are various, and preclude any general classification. During the last fiscal year the whole number of accounts settled in this office in this branch of its business was 1,846, involving an expenditure of \$4,068,262 73. The number of accounts will not diminish during the present fiscal year.

The following classification embraces the several accounts examined and settled: Construction and repairs of public buildings, furniture for public buildings, public printing, Government asylum, deaf and dumb asylum, steamboat inspectors, life-saving station, contingent expenses of United States depositories, Columbia Hospital, timber agents. Many other accounts of not less importance, that cannot well be classified, are settled.

In the recording division of the office there are employed five clerks, whose duties consist in recording the reports and certificates of the Auditor to the Comptroller of the Treasury and Commissioner of Customs, on the accounts accruing in the office and the correspondence incident thereto.

There is a large amount of miscellaneous business, much of it of great importance, requiring the highest clerical qualifications, which has no appropriate classification with any of the divisions previously described. It has its proper place in the routine of business, and is dispatched with scrupulous care.

When the Treasury Department was organized this office was created as a part of the original frame-work. Its duties were then specifically defined as the auditing branch of the Department. Its important original duties have been continued, greatly amplified, to which new and diversified duties of great importance have been added, in the long progress of legislation, as the exigencies of Government required. All of these functions are so inseparably connected with the operations of the Department proper, that they rest upon the foundation of permanency and the assurance of expansion. This connection must inevitably increase its business with the growth of the country, and the enlarged sphere of the Government precluding any expectation that the clerical force of the office can be reduced.

The clerks of the office deserve the highest commendation for their

fidelity and efficiency in the performance of their respective duties, and for the scrupulous care with which they protect the interests of the Government.

I know of no higher merit of those engaged in the service of Government, and more deserving of commendation and recompense, than the faithful and efficient performance of the entire range of duty in all its delicate and responsible relations. Justice and expediency may bring this appropriately within the province of legislation as worthy of the appreciation that honors fidelity, rewards merit, and imparts moral strength to Government.

The present salaries of the clerks bear a disproportionate relation (to their prejudice) to the grade and amount of labor they perform, and the incidental responsibilities they have to assume. Beyond this, and of much greater importance in its consequences, is the total insufficiency of their salaries for the comfortable support of their families, under the most stringent economy; and the cheerless effect that it has upon their official duties, from the perplexing expedients to which they are driven by embarrassments.

I most respectfully and earnestly recommend that their condition, which is marked by humiliation and want, may be meliorated by a liberal recompense commensurate with the claims of justice and sound policy.

Most respectfully, your obedient servant,

T. L. SMITH,  
*First Auditor.*

Hon. GEORGE S. BOUTWELL,  
*Secretary of the Treasury.*

## REPORT OF THE SECOND AUDITOR OF THE TREASURY.

TREASURY DEPARTMENT,  
*Second Auditor's Office, November 18, 1871.*

SIR: I have the honor to submit herewith the annual report of this office, for the fiscal year ending June 30, 1871, showing in detail the condition of business, in each division, at the commencement of the year, its progress during the year, and its condition at the end thereof.

### BOOK-KEEPERS' DIVISION.

The following statement shows the amount and nature of the work performed by this division during the year:

*Requisitions registered, journalized, and posted.*

(On what account drawn.	Number.	Amount.
<b>DEB'T REQUISITIONS.</b>		
<i>Pay.</i>		
Advances in favor of Pay Department .....	71	\$16,213,000 00
Advances in favor of Adjutant General's Department .....	4	212,360 15
Advances in favor of Ordnance Department .....	129	1,630,244 87
Advances in favor of Medical Department .....	9	124,000 00
Advances under direction of the Secretary of War .....	10	47,132 50
Advances in favor of Indian Department .....	829	4,513,429 59
Advances in favor of the General of the Army .....	3	4,000 00
Advances under appropriations of Pay Department .....	64	19,700 96
Advances under appropriations of Adjutant General's Department .....	23	1,796 94
Advances under appropriations of Ordnance Department .....	7	90,409 41
Advances under appropriations of Medical Department .....	176	54,686 44
Advances under appropriations in charge of Secretary of War .....	66	71,724 97
Advances under appropriations of Quartermasters' Department .....	1	15 06
Advances under appropriations of Indian Department .....	865	3,331,940 69
Advances under special acts of Congress .....	12	19,528 55
Payments to Treasury United States—internal revenue fund .....	35	47,907 91

## PAPERS ACCOMPANYING THE

*Requisitions registered, journalised, and posted—Continued.*

On what account drawn.	Number.	Amount.
Payments to National Asylum for Disabled Volunteer Soldiers.....	12	\$296, 287 32
Payments to Soldiers' Home.....	23	93, 920 47
Total payments.....	2, 002	26, 701, 892 74
<b>TRANSFER.</b>		
Requisitions issued for the purpose of adjusting appropriations: Transferring amounts from appropriations found to be chargeable to such as are entitled to credit on the books of the Second Auditor's Office.....	18	10, 497, 991 34
Transferring amounts as above to the books of the Third Auditor's Office.....	353	639, 820 44
Transferring amounts as above to the books of the Register's Office.....	14	8, 147 95
Total transfers.....	385	11, 145, 965 73
Aggregate debits.....	2, 387	37, 847, 858 47
<b>CREDIT REQUISITIONS.</b>		
<i>Deposit.</i>		
In favor of Pay Department.....	24	188, 506 90
In favor of Ordnance Department.....	32	9, 130, 555 70
In favor of Adjutant General's Department.....	10	38 27
In favor of Medical Department.....		14, 117 66
In favor of Quartermaster's Department.....		14 45
In favor of Indian Department.....	21	426, 006 66
Total deposit.....	87	9, 759, 299 64
<i>Counter.</i>		
Requisitions issued for the purpose of adjusting appropriations: Transferring amounts to appropriations entitled to credit from appropri- ations found to be chargeable on the books of the Second Auditor's Office.....	17	10, 519, 370 35
Transferring amounts as above from appropriations on the books of the Third Auditor's Office to the books of the Second Auditor's Office.....	22	94, 078 73
Transferring amounts as above from the books of the Fourth Auditor's Office to those of the Second Auditor's Office.....	1	21, 606 00
Transferring amounts as above from the books of the First Auditor's Office to those of the Second Auditor's Office.....	5	8, 832 97
Total counter.....	45	10, 643, 908 04
Aggregate credits.....	139	20, 403, 207 68
Aggregate debits and credits.....	2, 519	53, 251, 066 15
Deducting the credits from the debits shows the net amount drawn out to be.....		17, 444, 650 79
<b>APPROPRIATION WARRANTS.</b>		
<i>Credits.</i>		
In favor of appropriations of Pay Department.....	7	96, 073, 526 26
In favor of appropriations of Adjutant General's Department.....		473, 000 00
In favor of appropriations of Ordnance Department.....		762, 912 53
In favor of appropriations of Medical Department.....		108, 000 00
In favor of appropriations in charge of Secretary of War.....		325, 000 00
In favor of appropriations in charge of the General of the Army.....		5, 000 00
In favor of appropriations of the Quartermaster's Department.....		1, 350, 000 00
In favor of appropriations of Indian Department.....	54	*13, 378, 496 01
Under special acts of relief by Congress.....	3	105, 412 55
Total credits.....	64	42, 580, 347 37
<i>Debits.</i>		
Transfer from draft and substitute fund to contingencies of the Army.....	1	150, 000 00
Transfer from "fulfilling treaty with Apaches, Kiowas, and Comanches" to appropriation for "maintenance and education of Helen and Heloise Lincoln".....	1	5, 000 00
Transfer from "fulfilling treaty with Sioux of different tribes, including Santee Sioux, in the State of Nebraska," to appropriation for the "relief of Mrs. Fanny Kelly".....	1	5, 000 00
Total debits.....	3	160, 000 00
Aggregate debits and credits.....	67	42, 740, 347 37
Excess of credits over debits.....		42, 420, 347 37

\* Appropriations for two fiscal years are included in this amount, the appropriation warrant for the year ending June 30, 1872, amounting to \$5,419,540 96, having been issued before June 30, 1871.



## REPORT OF THE SECRETARY OF THE TREASURY.

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## CONDENSED BALANCE SHEET OF APPROPRIATIONS.

	War Department.	Indian Department.
<i>Credit.</i>		
Balance to credit of all appropriations on the books of this office June 30, 1871.	\$38,387,878 27	\$4,066,042 01
Amount credited by appropriation warrant during fiscal year ending June 30, 1871.	29,201,851 36	13,378,496 01
Amount credited by deposit and transfer requisitions during same period.	19,949,907 40	453,300 28
Amount credited in Third Auditor's Office to appropriations used in common by both offices.	335,874 71	.....
Total .....	77,875,511 74	17,897,838 30
<i>Debit.</i>		
Balance to debit of appropriations on the books of this office June 30, 1871.	.....	5,000 00
Amount debited to appropriations by transfer warrants during fiscal year ending June 30, 1871.	150,000 00	10,000 00
Amount drawn from appropriations by requisition during same period.	29,964,868 20	7,882,990 27
Amount drawn in Third Auditor's Office from appropriations used in common by both offices.	1,976,285 25	.....
Balance remaining to the credit of all appropriations on the books of this office June 30, 1871.	45,784,358 29	9,998,848 03
Total .....	77,875,511 74	17,897,838 30

## SETTLEMENTS MADE.

During the year the following settlements of a miscellaneous character were made by this division.

On what account.	Number.	Amount.
Transfer settlements for the adjustment of appropriations.....	5	\$10,495,429 88
Transfers to books of Third Auditor's Office .....	3	436,178 01
Large and payments to officers.....	2	102 90
Total.....	10	10,931,710 85

## SETTLEMENTS ENTERED.

Paymasters .....	467
Recruiting.....	244
Ordnance .....	69
Medical .....	70
Treasurer United States, internal revenue fund .....	6
Soldiers' Home.....	23
National Asylum for Disabled Volunteer Soldiers .....	12
Charges and credits to officers for overpayments, refundments, &c.....	352
Transfers to credit of disbursing officers on books of Third Auditor's Office.....	297
Miscellaneous .....	69
Indian .....	111
Claims, Indian .....	951
Claims, War .....	262
	<u>1,213</u>
Total number of settlements.....	<u>2,933</u>
Number of certificates given to the Third Auditor's Office and the different divisions of this office.....	<u>1,180</u>
Number of letters written .....	<u>673</u>

## PAPERS ACCOMPANYING THE

## PAYMASTER'S DIVISION.

The total number of accounts examined and settlements made during the year is 2,274, as follows:

Paymasters' accounts examined and reported .....	843
Old settlements of paymasters' accounts revised .....	976
Charges against officers on account of double payments .....	283
Credits to officers for overpayments refunded .....	21
Miscellaneous .....	151
<b>Total .....</b>	<b>2,274</b>

The amounts involved in the above are as follows:

Paymasters' accounts .....	\$124,063,652 23
Amount of fines, forfeitures, &c., for the support of the National Asylum for Disabled Volunteer Soldiers ascertained to be due: 1st, in the current examination of paymasters' accounts, \$223,396 04; 2d, in a special examination, \$77,974 48; and 3d, in the adjustment of claims of the heirs of deceased soldiers, \$1,846 47. The amount found due has been paid to the asylum in accordance with the act of Congress of March 21, 1866, as follows:	
August 4, 1870 .....	\$46,947 91
September 17, 1870 .....	11,188 59
October 6, 1870 .....	14,703 69
November 2, 1870 .....	15,816 17
December 3, 1870 .....	14,179 72
January 5, 1871 .....	57,959 61
February 1, 1871 .....	5,412 57
March 1, 1871 .....	17,443 70
April 1, 1871 .....	27,457 16
May 1, 1871 .....	21,742 47
June 1, 1871 .....	14,980 27
June 30, 1871 .....	55,385 13
	<b>303,216 99</b>
Amount of fines, forfeitures, &c., for the support of the Soldiers' Home, ascertained to be due in the examination of paymasters' accounts, and paid to said Soldiers' Home in accordance with the act of Congress of March 3, 1859, as follows:	
October 11, 1870 .....	\$27,009 33
January 10, 1871 .....	10,427 79
April 4, 1871 .....	8,527 29
May 5, 1871 .....	389 93
June 2, 1871 .....	2,281 29
June 15, 1871 .....	56 86
June 30, 1871 .....	3,632 16
	<b>52,324 65</b>
Amount credited to the Treasurer of the United States on account of tax on salaries .....	<b>41,701, 85</b>
Amount transferred from the appropriation for "Pay of the Army" to that for "Ordnance, ordnance stores, and supplies" on account of deductions from the pay of officers and soldiers for ordnance and ordnance stores, in accordance with Par. 1380, Revised Army Regulations of 1863 .....	<b>29,134 58</b>
Amount transferred from the appropriation for "Pay of the Army" to that for "Support of Bureau of Refugees, Freedmen, and Abandoned Lands," being an amount due the Freedmen's Bureau .....	<b>208 50</b>
Amount transferred from the appropriation for "Pay of the Army" to the books of the Third Auditor's Office, on account of deductions from the pay of soldiers for tobacco, pursuant to General Orders No. 63, War Department, Adjutant General's Office, June 11, 1867 .....	<b>158,297 92</b>
Amount transferred to the books of the Third Auditor's Office on account of stoppages against officers for subsistence stores, quartermasters' stores, transportation, &c. ....	<b>191,898 31</b>
Amount passed to the credit of paymasters still in the service on account of sums disbursed by them in payment of outstanding checks of paymasters out of service .....	<b>2,519 61</b>
Amount charged to officers on account of over-payments .....	<b>387 18</b>
Amount charged to officers on account of double payments .....	<b>68,363 83</b>

Amounts charged to paymasters for payments made on forged receipts	\$387 97
Amount credited to officers for refundment of pay drawn twice, and for sums deposited by them to close their accounts.....	5,355 51
Amount of balances found due paymasters, and paid them by requisition, to close their accounts.....	1,319 82
Amount paid to civilians for services under reconstruction acts.....	214 50
Amount credited to officers on account of refundment of erroneous payments made to them.....	329 10
Miscellaneous credits.....	1,643 60
<b>Total.....</b>	<b>124,920,956 15</b>

Accounts of paymasters on hand June 30, 1870.....	3,279
Accounts of paymasters received during the year ending June 30, 1871.....	635

<b>Total.....</b>	<b>3,914</b>
Accounts of paymasters audited and reported to the Second Comptroller during the year.....	843

Accounts of paymasters remaining unsettled June 30, 1871.....	3,071
Draft rendezvous accounts received from the Paymaster General during the year, and in course of examination.....	30

<b>Total number of accounts on hand June 30, 1871.....</b>	<b>3,101</b>
Number of letters written.....	12,621

The number of paymasters who rendered accounts to this office during the rebellion is 547. The accounts of 59 of these paymasters were balanced and closed prior to June 30, 1870, and 134 during the present fiscal year, making 193 paymasters whose accounts have been finally disposed of.

#### *Miscellaneous division.*

The ordnance, medical, and miscellaneous division, and the recruiting division were consolidated in September, 1870, and now form the miscellaneous division. The following statement shows the number of money accounts on hand in this division at the commencement of the year ending June 30, 1871, the number received and settled during the year, and the number remaining unsettled at the close of the year, together with the expenditure embraced in the settlements:

Ordnance, medical, and miscellaneous accounts on hand June 30, 1870....	623
Recruiting accounts on hand June 30, 1870.....	976
Number of accounts received during the year.....	1,599
<b>Total.....</b>	<b>2,368</b>
Number of accounts settled during the year.....	3,967
<b>Total.....</b>	<b>2,394</b>
Number of accounts remaining unsettled June 30, 1871.....	1,573

The amounts involved in the above settlements are as follows:

(Ordnance, medical, and miscellaneous:

Ordnance Department.....	\$1,433,508 93
Medical Department.....	215,034 80
Expended by disbursing officers out of the quartermaster's funds, not chargeable to said funds, but to certain appropriations on the books of this office.....	175,245 95
Contingencies of the Army.....	126,530 88
Providing for the comfort of sick and discharged soldiers.....	14,926 62
Expenses of military convicts.....	11,281 97
Bronze equestrian statue of Lieutenant General Winfield Scott.....	5,000 00
Expenses of court of inquiry held in 1868 and 1869.....	5,000 00
Army Medical Museum.....	2,239 21
Expenses of the Commanding General's office.....	2,311 60
Contingencies of the Adjutant General's Department, at Department headquarters.....	2,517 23

Medical and Surgical History and Statistics.....	\$1,961 15
Library of the Surgeon General's office.....	1,028 58
Sick and wounded soldiers' fund.....	243 32
Medals of honor for distinguished services.....	142 50
Relief of Friend A. Brainard, act May 4, 1870.....	300 00
Relief of Grenville M. Dodge, act May 6, 1870.....	4,350 00
Relief of James M. Trotter, act June 23, 1870.....	672 27
Relief of William H. Dupree, act June 23, 1870.....	551 74
Relief of Lot S. Bayless, act July 11, 1870.....	864 09
Relief of Malinda Harmon, act January 21, 1871.....	4,696 70
Relief of Henry H. Hoyt, act January 27, 1871.....	100 00
Relief of General John C. McQuiston and J. D. Skeen, act February 27, 1871.....	2,000 00
Relief of Abram G. Snyder, act March 3, 1871.....	5,000 00
Relief of James J. Hiles, act March 3, 1871.....	100 00
Relief of W. B. Carpenter, act March 3, 1871.....	588 02
Relief of William O. Sides, joint resolution February 16, 1871.....	130 00
Relief of William P. Thomasson, joint resolution March 3, 1871.....	377 70
	<hr/> \$2,023,703 26

## Regular recruiting:

Expenses of recruiting.....	198,435 46
Bounties to volunteers and regulars.....	1,425 00
Pay of the Army.....	2,061 42
Subsistence of officers.....	260 40
Pay in lieu of clothing for officers' servants.....	21 73
Medical and Hospital Department.....	11 00
	<hr/> 202,215 01

## Volunteer recruiting:

Collecting, drilling, and organizing volunteers.....	712,739 49
Bounty to volunteers and regulars.....	33,650 00
Draft and substitute fund.....	7,650 47
Pay of 2 and 3 years' volunteers.....	617 50
Pay of the Army.....	95 70
Subsistence of officers.....	31 50
Medical and Hospital Department.....	9 00
Pay in lieu of clothing for officers' servants.....	1 68
	<hr/> 754,795 34

## Local bounty:

Pay of 2 and 3 years' volunteers.....	3,930 92
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Total.....	<hr/> 2,984,644 53
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The registers of payments made to officers were transferred to this division August 15, 1870, since which date 1,048 paymasters' accounts have been examined for the necessary data, and 340 double payments to officers discovered and reported.

Total number of letters written, 2, 286.

## INDIAN DIVISION.

General report of the Indian division, for the fiscal year ending June 30, 1871:

Money accounts of agents on hand June 30, 1870.....	368
Property accounts of agents on hand June 30, 1870.....	528
Claims on hand June 30, 1870.....	None.
Money accounts of agents received during the year.....	673
Property accounts received during the year.....	252
Claims received during the year.....	969

Total.....	<hr/> 2,790
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Money accounts of agents audited during the year.....	520
Property accounts examined during the year.....	203
Claims settled during the year.....	902
Total.....	<hr/> 1,685

Money accounts of agents on hand June 30, 1871.....	521
Property accounts on hand June 30, 1871 .....	577
Claims on hand June 30, 1871 .....	7
<b>Total number of accounts, &amp;c., on hand June 30, 1871 .....</b>	<b>1,105</b>
Amount involved in money accounts audited .....	\$5,220,928 91
Amount involved in claims settled .....	2,973,705 72
<b>Total.....</b>	<b>8,194,634 63</b>
Number of letters written .....	1,417

## PAY AND BOUNTY DIVISION.

The following tabular statements exhibit in detail the operation of the two branches of the pay and bounty division during the year, together with the condition of the business of the division, both at the commencement and close of the year.

*Examining branch.*

The three following tables show the work performed by the examining branch of this division during the year:

*Claims in cases of colored soldiers, including both arrears of pay and bounties.*

Date.	Original claims.					Suspended claims.				Total number of claims examined.	No. of letters written.
	Whole number examined.	No. found correct.	No. found incomplete and suspended.	No. rejected.	No. of duplicate applications found.	Whole number examined.	No. completed by additional evidence received.	No. again suspended, additional evidence insufficient.	No. rejected.		
<b>1870.</b>											
July .....	232	17	190	25		1,615	438	1,079	98	1,847	2,181
August .....	303	22	256	25		1,832	430	1,331	71	2,135	2,452
September .....	162	6	127	29		1,723	408	1,222	93	1,825	2,067
October .....	116	7	88	21		1,237	238	999		1,353	1,532
November .....	165	7	139	19		1,637	276	1,146	235	1,822	2,041
December .....	164	4	128	32		1,849	186	1,211	432	2,013	2,297
<b>1871.</b>											
January .....	215	5	183	27		1,454	190	911	353	1,669	1,913
February .....	140	11	116	13		969	149	625	195	1,109	1,106
March .....	61	3	57	1		1,444	388	886	270	1,505	1,624
April .....	85	1	73	11		1,278	960	869	149	1,363	1,703
May .....	96	2	71	23		1,136	209	749	178	1,232	1,417
June .....	126	4	111	11		1,274	207	670	197	1,400	619
<b>Total.....</b>	<b>1,865</b>	<b>89</b>	<b>1,539</b>	<b>237</b>		<b>17,468</b>	<b>3,279</b>	<b>11,896</b>	<b>2,291</b>	<b>19,333</b>	<b>20,972</b>

## SUMMARY.

<b>1870.</b>											
July .....	3,783	329	1,891	653	701	4,961	1,067	3,397	547	8,744	8,297
August .....	3,726	650	1,932	321	793	5,045	1,013	3,390	442	8,771	6,957
September .....	3,302	485	1,935	515	367	5,895	1,533	3,824	448	9,107	10,836
October .....	2,609	469	1,297	324	319	4,444	958	2,799	687	7,053	6,049
November .....	4,092	220	2,661	432	718	5,587	1,123	3,579	886	9,679	6,305
December .....	2,155	212	1,113	419	411	5,895	1,043	3,671	1,181	8,050	10,004
<b>1871.</b>											
January .....	3,201	396	1,785	417	546	5,698	1,148	3,539	1,001	8,889	12,325
February .....	1,569	221	787	389	171	5,308	1,050	3,302	956	6,876	8,218
March .....	1,274	153	629	274	218	6,209	1,026	4,006	1,177	7,483	9,030
April .....	1,368	74	551	570	161	5,327	924	3,504	899	6,693	7,971
May .....	1,098	57	248	183	226	4,352	666	2,751	935	5,440	6,425
June .....	953	61	569	118	185	4,410	528	2,941	744	5,363	6,341
<b>Total.....</b>	<b>29,117</b>	<b>3,617</b>	<b>15,418</b>	<b>4,662</b>	<b>4,846</b>	<b>63,031</b>	<b>12,098</b>	<b>40,823</b>	<b>10,003</b>	<b>92,148</b>	<b>99</b>

## PAPERS ACCOMPANYING THE

## Claims in cases of white soldiers.

Additional bounty, act July 28, 1866, and amendments.										Arrears of pay and original bounty.														
Date.	Original claims.					Suspended claims.					Total number of claims examined.	No. of letters written.	Original claims.					Suspended claims.					Total number of claims examined.	No. of letters written.
	Whole number examined.	No. found correct.	No. found incomplete and	No. rejected.	No. of duplicate applica-	Whole number examined.	No. completed by additional evidence received.	No. again suspended—addi-	No. rejected.	No. found incomplete and			No. rejected.	No. of duplicate applica-	Whole number examined.	No. completed by additional evidence received.	No. again suspended—addi-	No. rejected.						
1870.																								
July	1,566	256	682	141	478	632	230	336	76	2,198	2,430	1,985	256	1,019	487	223	2,714	429	1,912	373	4,689	5,680		
August	1,997	417	1,076	15	489	829	229	530	80	2,626	1,570	1,428	241	600	281	304	2,384	354	1,739	291	3,810	2,935		
September	1,473	285	798	244	136	1,247	455	632	150	2,720	3,521	1,687	184	1,010	242	231	2,835	660	1,970	205	4,592	5,228		
October	1,163	316	575	143	120	1,141	389	430	322	2,304	2,474	1,330	146	434	300	190	2,066	331	1,370	365	3,396	2,043		
November	1,204	206	462	968	328	1,482	409	722	351	2,776	2,646	2,633	67	2,041	145	380	2,448	437	1,711	300	5,081	1,618		
December	805	140	332	155	178	1,428	453	772	173	2,323	2,625	1,186	68	653	293	233	2,618	374	1,688	556	3,804	5,068		
1871.																								
January	1,165	262	523	192	188	1,329	389	803	137	2,494	3,079	1,821	129	1,079	255	359	2,905	569	1,885	511	4,796	7,333		
February	286	97	79	103	7	1,471	446	732	883	2,342	2,342	1,143	113	592	273	164	2,688	455	1,945	468	4,010	4,870		
March	95	4	9	9	4	1,250	298	670	92	1,975	1,689	1,188	146	564	264	214	3,515	450	2,250	815	4,703	5,717		
April	16	4	4	6	2	647	161	402	84	965	1,965	1,965	69	474	553	179	3,402	503	2,233	668	4,667	5,305		
May	27	5	13	6	3	602	149	366	87	629	917	965	50	533	154	223	2,614	308	1,636	670	3,579	4,151		
June	20	4	10	6	.....	607	119	374	114	627	950	807	53	468	101	185	2,529	202	1,697	630	3,336	4,778		
Total	9,837	2,006	4,532	1,388	1,953	12,665	3,747	6,959	1,959	22,502	25,115	17,415	1,592	9,673	3,347	2,884	32,896	5,073	21,976	5,850	50,313	52,784		

*Settling branch.*

The three following tables show the work performed by the settling branch of this division during the year:

*Claims in cases of white soldiers.*

Data.	Additional bounty act, July 28, 1866.					Arrears of pay, &c., act July 22, 1861.				
	Number of claims.				Amount involved.	Number of claims.				Amount involved.
	Received.	Allowed.	Rejected.	Whole No. disposed of.		Received.	Allowed.	Rejected.	Whole No. disposed of.	
1870.										
July.....	2,493	586	120	706	\$62,067 17	1,984	769	250	1,019	\$37,980 73
August.....	1,410	669	100	769	70,366 20	1,088	598	139	737	78,680 69
September.....	825	433	85	578	51,950 00	1,195	550	177	727	73,660 03
October.....	738	694	71	765	78,259 87	1,039	797	140	937	95,571 89
November.....	963	852	54	1,006	103,808 04	1,141	599	173	772	75,113 55
December.....	1,043	703	83	766	73,103 04	1,209	561	112	673	79,989 92
1871.										
January.....	892	800	125	925	85,204 31	1,744	664	221	885	177,582 75
February.....	29	512	60	572	60,970 00	786	633	160	793	95,040 22
March.....	25	544	63	607	62,488 10	1,054	634	210	844	90,697 91
April.....	16	339	80	419	38,670 99	877	581	104	685	81,649 47
May.....	33	310	60	370	36,481 55	1,008	528	109	637	72,850 37
June.....	14	195	20	215	23,000 00	817	431	106	537	59,365 67
Total.....	9,414	6,797	921	7,718	754,763 23	14,602	7,345	1,931	9,246	1,084,233 25

*Claims in cases of colored soldiers, including both arrears of pay and bounties.*

Data.	Number of claims—				Amount involved.
	Received.	Allowed.	Rejected.	Whole No. disposed of.	
1870.					
July.....	300	470	32	502	\$21,213 00
August.....	245	250	32	297	41,414 68
September.....	189	135	23	178	95,717 35
October.....	161	160	14	174	26,154 45
November.....	148	309	40	358	54,143 59
December.....	167	273	34	307	44,875 47
1871.					
January.....	187	296	34	330	51,098 72
February.....	55	175	22	197	29,627 67
March.....	71	234	19	253	37,849 99
April.....	103	277	40	317	42,568 94
May.....	95	194	25	219	34,966 33
June.....	140	198	49	247	34,403 82
Total.....	1,831	2,991	33	3,364	509,717 94

## Summary.

Date.	Number of claims—				Amount in- volved.	Number of letters written.
	Received.	Allowed.	Rejected.	Total No. of claims dis- posed of.		
1870.						
July .....	5,777	1,825	402	2,227	\$248,160 90	5,400
August .....	3,343	1,517	271	1,782	190,681 46	4,273
September .....	2,163	1,198	285	1,493	154,322 38	4,530
October .....	1,928	1,651	225	1,876	203,990 14	4,400
November .....	2,192	1,860	277	2,137	232,465 18	4,380
December .....	2,490	1,537	229	1,766	199,967 42	3,319
1871.						
January .....	2,823	1,760	380	2,140	313,885 78	4,615
February .....	869	1,320	242	1,562	185,697 89	3,696
March .....	1,150	1,412	292	1,704	191,035 93	4,453
April .....	960	1,197	224	1,421	162,889 40	3,444
May .....	1,136	1,032	193	1,225	148,298 25	3,914
June .....	971	824	175	999	116,769 69	3,192
Total .....	25,811	17,123	3,195	20,338	2,348,164 42	49,616

*Consolidated statement, showing the operation of the entire division for the fiscal year ending June 30, 1871.*

Date.	Number of claims.			Whole number disposed of.	Amount involved.	Number of letters written.	Number of certificates issued.
	Received.	Allowed.	Rejected.				
1870.							
July .....	5,777	1,825	2,203	4,128	\$248,160 90	13,697	2,062
August .....	3,343	1,517	1,827	3,334	190,681 46	11,320	1,293
September .....	2,163	1,198	1,626	2,824	154,322 38	15,366	1,938
October .....	1,928	1,651	1,755	3,406	203,990 14	9,449	1,479
November .....	2,192	1,860	2,317	4,177	232,465 18	10,679	1,522
December .....	2,490	1,537	2,240	3,777	199,967 42	13,323	1,645
1871.							
January .....	2,823	1,760	2,348	4,108	313,885 78	16,940	1,765
February .....	869	1,320	1,768	3,038	185,697 89	11,914	1,477
March .....	1,150	1,412	1,961	3,373	191,035 93	13,489	1,733
April .....	960	1,197	1,874	3,071	162,889 40	11,418	1,342
May .....	1,136	1,022	1,537	2,569	148,298 25	10,399	1,221
June .....	971	824	1,399	2,223	116,769 69	10,533	1,084
Total .....	25,811	17,123	22,935	40,078	2,348,164 42	148,437	18,571

In addition to the above there have been made in this division sev-  
 enteen settlements on account of fines, forfeitures, &c., against soldiers  
 of the regular Army, amounting to \$28,957 43, paid to the treasurer of  
 the Soldiers' Home in accordance with the act of Congress of March 3,  
 1859, making the total number of settlements 17,140, and the total dis-  
 bursements \$2,377,121 85.

Number of claims under act July 28, 1866, (white,) on hand June 30, 1870 ..... 10,040  
 Number of claims for arrears of pay and bounty on hand June 30, 1870 ..... 29,835  
 Number of colored claims on hand June 30, 1870 ..... 13,887

**Total number of claims on hand June 30, 1870 ..... 53,762**

Number of claims under act July 28, 1866, (white,) on hand June 30, 1871 ..... 7,364  
 Number of claims for arrears of pay and bounty (white) on hand June 30, 1871 ..... 23,960  
 Number of colored claims on hand June 30, 1871 ..... 8,171

**Total number of claims on-hand June 30, 1871 ..... 39,495**



The following statement shows the condition of the claims on hand :

Number of claims suspended, awaiting evidence to be filed by claimants or their attorneys .....	29,542
Number of claims under the decision of the Supreme Court in the case of United States appellants, vs. Hosmer, awaiting further action of Congress .....	7,874
Number of claims ready for settlement .....	1,851
Number of claims unexamined June 30, 1871 .....	223
<b>Total</b> .....	<b>39,490</b>

#### PROPERTY DIVISION.

The following statement shows the condition of business in this division :

Property returns of officers on hand June 30, 1870 .....	63,775
Property returns of officers received during the year .....	9,954
<b>Total</b> .....	<b>73,729</b>
Property returns of officers examined during the year .....	39,171
Property returns of officers on hand June 30, 1871 .....	34,558
Certificates of non-indebtedness issued to officers .....	1,005
Amount stopped from pay of officers for property not accounted for .....	\$766 14
Number of letters written during the year .....	12,685
Number of letters recorded .....	8,164
Number of property returns registered .....	9,954

#### DIVISION OF INQUIRIES AND REPLIES.

The work performed in the division of inquiries and replies during the year ending June 30, 1871, is as follows :

Number of inquiries on hand unanswered June 30, 1870 .....

Officers making inquiry.	No. received.	No. answered.
Adjutant General .....	2,850	2,839
Paymaster General .....	4,945	4,965
Quartermaster General .....	960	800
Commissionary General of Subsistence .....	50	51
Third Auditor .....	912	916
Fourth Auditor .....	23	27
Commissioner of Pensions .....	4,106	4,127
Other sources .....	7,829	4,880
<b>Total</b> .....	<b>21,015</b>	<b>18,138</b>

Inquiries on hand unanswered June 30, 1871 .....	3,666
Corrections of records made by request of the Adjutant General .....	649
Rolls and vouchers copied for Adjutant General, Paymaster General, and Attorney General .....	923
Rolls and vouchers copied for preservation in this office .....	733
Rolls and vouchers partially copied and traced, for preservation in this office .....	1,556
Number of letters written .....	3,503
Number of pages of foolscap paper used in copying .....	2,166

The nature and importance of the work performed by this division is indicated by the following summary of the kind of information furnished to the officers making inquiry :

*To the Adjutant General.*—Statements of the pay and clothing of soldiers who claim that they never received any discharge. Miscellaneous information from the muster and pay-rolls to enable the Adjutant General to perfect the records of his office.

*To the Paymaster General.*—Dates of enlistment, muster, and first pay-

ment of Pennsylvania volunteers, to whom that State claims to have paid advance pay. Sundry information in cases pending in the Paymaster General's Office. (The information furnished in the Pennsylvania cases has been used by the Third Auditor in adjusting claims, amounting to \$618,000.)

*To the Quartermaster General and Commissary General of Subsistence.*—Verification of officers' signatures to receipts for Army stores to enable those Bureaus to settle claims for payment for such stores.

*To the Third Auditor.*—Data necessary to enable him to settle claims for horses lost in the Army. Statements as to whether the money value of stores purchased from the United States by officers has been deducted from the pay of such officers. To obtain this information the entire pay accounts of the officers concerned have to be examined.

*To the Fourth Auditor.*—Amount of bounty due soldiers transferred from the Army to the Navy.

*To the Commissioner of Pensions.*—Data necessary to enable the Pension Bureau to settle claims for pension, including copies of any evidence of marriage, relationship, &c., that may have been filed in this office.

*Other sources.*—Replies to miscellaneous inquiries from adjutant generals of States and other persons.

#### DIVISION FOR THE INVESTIGATION OF FRAUDS.

During the year 4,490 cases have been under examination, investigation, and prosecution, by this division. Briefs have been prepared in 562 cases; 454 have been finally disposed of, and 140 cases have been prepared for suit and prosecution through the various United States district courts.

The amounts recovered by suit and otherwise are as follows:

Money recovered by draft, certificate of deposit and current funds, and turned into the Treasury to be credited to the proper appropriations. ....	\$7,557 02
Amount directed to be turned over by the Freedmens' Bureau to United States paymasters to be credited to the proper appropriations, said amount having been paid to that Bureau upon claims subsequently discovered by this division to be fraudulent or erroneous. ....	9,128 51
Amount wrongfully withheld by claim agents and secured to the proper claimants by interposition of this office and United States district courts. ....	4,884 73
Amount of Treasury certificates and checks, issued in fraudulent cases, recovered before payment. ....	575 65
Amount recovered on forged checks and turned over to Paymasters William B. Rochester and H. B. Reese to be credited to the proper appropriations. ....	250 00
Amount paid by the national banks of Indiana upon forged indorsements to checks drawn upon the assistant treasurer at New York, recovered from them by the joint action of the Secretary's office and this office. ....	15,562 79
Amount of overpayments recovered and turned over to United States paymasters for appropriate credit. ....	2,087 29
Amount of interest recovered. ....	226 16
<b>Total. ....</b>	<b>40,372 15</b>

There is also on hand a bond for \$1,700, payable to the United States in case certain money drawn upon forged receipts and powers of attorney is not paid over to the rightful claimants.

There are now under examination and investigation 4,036 cases involving fraud, forgery, unlawful withholding, overpayments, &c., as follows:

Fraudulent and contested claims in cases of white soldiers, in which settlements had been made prior to notice of fraud or receipt of adverse claim. ....	1,194
Fraudulent and contested unsettled claims in cases of white soldiers. ....	389

Fraudulent and contested claims in cases of colored soldiers, in which settlements had been made prior to notice of fraud or receipt of adverse claims...	557
Contested claims of widows of colored soldiers, involving fraud in the marriage evidence.....	234
Unsettled and contested claims in cases of colored soldiers.....	265
Unsettled claims executed in Shelby County, Tennessee, in behalf of heirs of colored soldiers, all believed to be tainted with fraud.....	1,125
Cases alleged to have been paid upon fraudulent papers, and now awaiting the action of the Court of Claims.....	72
Cases involving overpayments to United States Army officers, and in which civil actions are to be instituted.....	161
Miscellaneous claims suspected of being fraudulent.....	39
<b>Total.....</b>	<b>4,036</b>
Number of claims on hand June 30, 1870.....	3,370
Number of claims received during the year.....	1,120
<b>Total.....</b>	<b>4,490</b>
Number of claims finally disposed of during the year.....	454
Number of claims on hand June 30, 1871.....	4,036
Number of letters written.....	5,059

The following is a summary of the work performed by the division since its organization :

Date.	Cases under examination.	Cases disposed of.	Amount recovered.
1869.....	3,143	540	\$21,105 17
1870.....	3,044	490	24,010 38
1871.....	4,490	454	40,372 15

It will be observed that the exhibit of this division indicates a largely increased amount of labor and responsibility over that of any previous year. This fact may be accounted for by the careful and rigid scrutiny, exercised by the entire office, in the examination and comparison of claims, vouchers, receipts, and paymasters' returns, and the discovery of new and bold operations of certain claim agents.

Parties implicated in pay and bounty frauds have been tried and convicted in most of the United States district courts, and great credit is due the Solicitor of the Treasury and the different United States district attorneys and marshals, for their zealous and effective co-operation in prosecuting criminal and civil suits, securing the return of money and bringing to light the schemes and practices of swindlers. Perhaps the greater benefits resulting from this action will be the repression of fraud and the prevention of future attempts to defraud the Treasury.

Obstacles are encountered in prosecuting the various frauds committed and attempted in the collection of claims adjusted by this office, owing to the absence of law regulating the fees and duties of claim agents, the doubtful construction of the thirteenth section of the act of July 4, 1864, regarding the wrongful withholding of money, the actual construction given by the courts of the act of March 2, 1863, and the bar to criminal prosecution created by the limitation act of April 30, 1790; and I respectfully renew my request that the attention of Congress be invited to the necessity of supplying a remedy, especially by extending the time within which persons guilty of frauds may be criminally

prosecuted, and by affording greater facilities and powers for the investigation and discovery of frauds, and authorizing the reimbursement of money expended by United States officers in the discharge of extra official services.

#### ARCHIVES DIVISION.

The work performed by this division is shown by the following statement:

Number of accounts filed in rooms of temporary deposit awaiting settlement..	3,071
Number of confirmed settlements received from the Second Comptroller, verified, briefed, and transferred to permanent files:	
Paymasters .....	467
Indian .....	928
Miscellaneous .....	1,544
	<hr/> 2,939
Number of paymasters' accounts received from Paymaster General .....	605
Number of medical property accounts received from Surgeon General .....	1,626
Number of paymasters', Indian, and miscellaneous accounts verified, arranged and filed .....	3,544
Number of paymasters' accounts re-examined, boarded, and marked .....	4,032
Number of settlements withdrawn and returned to files .....	6,568
Number of vouchers withdrawn and returned to accounts .....	78,755
Number of abstracts of accounts put in book form .....	409
Number of duplicate vouchers examined and attached to originals .....	150,772
Number of mutilated rolls repaired with tracing muslin .....	47,418

This division is charged with the care of all the office furniture, blanks, &c., and keeps the record of payments to regiments, of which an entirely new register has been transcribed during the year.

Number of letters written .....	602
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#### REGISTRY AND CORRESPONDENCE DIVISION.

Statement of work performed by the registry and correspondence division for the year ending June 30, 1871.

Number of letters received .....	41,517
Number of letters written .....	45,846
Number of letters recorded .....	6,078
Number of letters referred to other Bureaus .....	2,184
Number of dead letters received and registered .....	4,552
Number of licenses received and registered .....	566
Number of claims received, briefed, and registered .....	37,192
Number of miscellaneous accounts received from other offices and distributed ..	3,060
Number of miscellaneous vouchers received, briefed, and registered .....	133,998
Number of pay and bounty certificates examined, registered, and mailed .....	18,561
Number of pay and bounty certificates examined, registered, briefed, and forwarded to the Paymaster General, in accordance with joint resolution of April 10, 1869 .....	9,763
Number of letters with additional evidence in the case of suspended claims, received, briefed, and registered .....	16,869
Number of reports calling for requisitions sent to War Department .....	591
Number of discharges sent to claimants and returned uncalled for .....	777

In addition to the above, 1,233 claims for additional bounty under act of July 28, 1866, were received after January 13, 1871, the limit fixed by the act of July 13, 1870, for filing such claims. These cannot be adjusted without further legislation by Congress.

For convenience of reference, I annex the following consolidated statement showing the various classes of accounts settled in the office, the number of each class on hand at the beginning of the year, the number

received and disposed of during the year, and the number on hand at the end of the year; also the amount involved in settlements:

	On hand June 30, 1870.	Received during year.	Disposed of during year.	On hand June 30, 1871.	Amount involved in settlements.	No. of letters written.
Patent Office	3,279	665	847	3,101	\$124,563,414 51	12,621
Patent Office, property	368	671	830	301	5,230,328 51	1,417
Patent Office, property	592	552	861	377	1,100,000 00	145,437
Patent Office, property	969	962	962	967	2,953,501 72	2,286
Patent Office, property	53,702	25,411	49,075	30,435	2,318,161 42	12,685
Patent Office, property	621				2,024,763 26	
Patent Office, property	655	2,365	2,394	1,571	2,222,151 01	
Patent Office, property	102				74,735 31	
Patent Office, property	219				3,930 92	
Patent Office, property	61,755	9,951	39,151	31,552		
Patent Office, property		24	24		81,282 68	
Patent Office, property		12	12		20,216 29	
Total	121,311	40,728	81,207	79,882	138,475,357 16	177,446

Besides the number of letters stated in the above table, there have been written 55,683 relating to the miscellaneous business of the office, making a total of 233,129.

Average number of clerks employed during the year, 265.

In addition to the foregoing, various statements and reports have been prepared and transmitted from this office, as follows:

Annual report to the Secretary of the Treasury of the transactions of the office during the fiscal year.

Annual statement of the recruiting fund, prepared for the Adjutant General of the Army.

Annual statement of the contingencies of the Army, prepared for the Secretary of War.

Annual report of balances on the books of this office remaining unaccounted for more than one year, transmitted to the First Comptroller.

Annual report of the balances on the books of this office remaining unaccounted for more than three years, transmitted to the First Comptroller.

Annual statement of the clerks and other persons employed in this office during the year 1870, or any part thereof, showing the amount paid to each on account of salary, with place of residence, &c., in pursuance of the eleventh section of the act of August 26, 1842, and resolution of the House of Representatives of January 13, 1846, transmitted to the Secretary of the Treasury.

Monthly tabular statement showing the amount of business transacted in the office during the month, and the number of accounts remaining unsettled at the close of the month, transmitted to the Secretary of the Treasury.

Monthly report of absence from duties of employes of this office with reasons therefor, transmitted to the Secretary of the Treasury.

Pay rolls, upon which payment was made to the employes of this office, prepared semi-monthly, in duplicate.

During the past year the work of the office has been seriously delayed by reason of the reduction of its clerical force, and I earnestly recommend that it be temporarily increased to three hundred clerks, as it stood prior to July 1, 1870. In making estimates for the next fiscal year, I have felt constrained to follow the law making appropriations for the office, while convinced that the sum allowed is not sufficient.

I have believed it to be the soundest policy to employ an experienced force sufficient to close up the settlement of disbursement and other accounts growing out of the war, as rapidly as possible, until the current business of the office can be reached, and then to reduce it to such a number of clerks as may be necessary to perform the current work. An earlier reduction delays settlements and postpones the time when nothing but the current work will remain to be done.

In the annual reports of this office for the years 1864, 1865, and 1866, the subject of the early settlement of paymasters' accounts was alluded to and particularly urged, but there has been no opportunity, up to the present time, to specially facilitate their settlement.

In 1865, when such accounts, covering a disbursement of \$400,000,000 were in the office unsettled, I stated that, with all the force that could then be employed, it would take *five years to settle the accounts then on hand*, and urged that a sufficient number of skilled clerks be employed to settle them in *one year*, using the following language:

"The difference in the expense between settling these accounts in five years with the present force, and settling the same in the manner proposed, is sixty-four thousand dollars. It is a large sum, but is only about one-sixth of one per cent. on the disbursements to be examined and settled, and is small compared with the probable loss to the Government through long delayed settlement, or the employment of inexperienced clerks."

The accounts referred to above, were largely increased by the heavy disbursements of 1865 and 1866, when the armies were mustered out. All the clerks possessing the requisite qualifications that could be spared from other branches of work, have been employed in the settlement of these accounts, but many of these have been from time to time necessarily withdrawn to attend to special work required by new legislation, and where the services of skilled and careful clerks were needed. During the last two years a portion of this force has been detailed to make the necessary examination of paymasters' accounts, to ascertain the amount of fines, forfeitures, stoppages, &c., and make settlements in favor of the "National Asylum for Disabled Volunteer Soldiers," and nearly one-third of the entire force has been employed in revising previous settlements and removing suspensions therein, to comply with new provisions of law in relation to the settlement of disbursing officers' accounts, and the rulings of the Comptroller.

Notwithstanding these embarrassments, the accounts of volunteer paymasters have been examined and settled, with the exception of a few who were retained in the service to pay Treasury certificates, or who have failed to close their accounts when notified of the balance due. The accounts of this latter class generally involve but small amounts, and are being prepared for suit as rapidly as possible.

But few of the accounts now remaining unsettled are either so large, or so difficult as those that have been settled, and it is believed that by an early temporary increase of the clerical force, as asked for, all paymasters' accounts on hand can be settled within a year.

It affords me great pleasure to commend the general ability, industry, and faithfulness of the gentlemen connected with this office.

In the hope that the recommendation for a temporary increase of the clerical force of the office may meet your approval, I have the honor to be, very respectfully,

E. B. FRENCH,  
Auditor.

Hon. GEORGE S. BOUTWELL,  
Secretary of the Treasury.

## REPORT OF THE THIRD AUDITOR OF THE TREASURY.

TREASURY DEPARTMENT,  
Third Auditor's Office, August 23, 1871.

SIR: In compliance with instructions from your office, and the requirements of law, I have the honor to transmit herewith the following report of the business operations of this office for the fiscal year ending June 30, 1871: .

## BOOKKEEPER'S DIVISION.

The duties devolving upon this division are, in general, to keep the appropriation and money accounts of the office.

The annexed statement of the financial operations of the office during the fiscal year ending June 30, 1871, exhibits the amounts drawn on specific appropriations except those under direction of the Chief of Engineers of the Army, which are aggregated and entered under the general heading "Engineer Department." It also shows the repayments into the Treasury for the same period.

The average number of clerks engaged in this division during the period embraced in this report has been eight, and that number now constitutes the active force of the division.

The amount of requisitions drawn on the Secretary of the Treasury by the Secretaries of War and of the Interior for the fiscal year ending June 30, 1871, was \$63,501,843 58, as follows:

On account of Quartermaster's Department.....	\$4,856,992 01
Incidental expenses, Quartermaster's Department.....	1,038,007 81
Barracks and quarters.....	1,184,768 12
Army transportation.....	6,347,509 59
Officers' transportation.....	32,182 87
Cavalry and artillery horses.....	263,448 00
Purchase of stoves.....	1,358 14
Clothing of the Army.....	923,158 25
National cemeteries.....	327,369 55
Keeping, &c., prisoners of war.....	300 00
Payment, tax on salaries.....	88 61
Services, Oregon and Washington volunteers.....	35,135 49
Pay, Oregon and Washington volunteers.....	6,933 23
Suppressing Indian hostilities in Minnesota in 1862.....	17,734 63
Minute men in Pennsylvania, Maryland, Ohio, Indiana, and Kentucky.....	96 38
Barren of Refugees, Freedmen, and Abandoned Lands.....	462,394 72
Capture of Jefferson Davis.....	1,611 50
Redeem River Indian war.....	33,844 83
Salaries of the Army.....	3,862,069 50
Pay and supplies of 100-day volunteers.....	6,883 98
Collecting, drilling, and organizing volunteers.....	756 64
Signal service.....	5 000 00
Claims, act March 3, 1849.....	197,111 75
Commutation of rations to prisoners of war in rebel States.....	16,000 00
Remembering Ohio and Indiana for expenses, &c.....	100 00
* Refunding to States expenses incurred in raising volunteers.....	2,904 505 44
Payment to the State of Kansas.....	330 00
Payment under "relief acts" to sundry persons.....	52,726 50
Pensions, invalid.....	12,340,544 11
Pensions, widows and others.....	21,793,380 83
Pensions, war of 1-12.....	234,000 00
Military Academy, (sundry appropriations).....	1,800 84
Relief of destitute people in the District of Columbia.....	7,500 00
Engineer Department, (sundry appropriations).....	6,318 939 27

\* The Honorable Secretary of the Treasury having declined payment on requisition No. 7136, dated June 23, 1871, in favor of the State of Kentucky, for the sum of \$23,358 72, the amount of this requisition, although canceled by direction of the Secretary of the Treasury, is still retained in this report in order to exhibit the full amount of labor performed by this office during the fiscal year.

## REPAYMENTS.

Amount of counter requisitions drawn on sundry persons in favor of the Treasurer of the United States during the fiscal year ending June 30, 1871, was \$3,225,777 67, as follows :

On account of deposit.....	\$1,531,808 48
Third Auditor's transfer requisitions.....	1,070,635 27
Second Auditor's transfer requisitions.....	613,661 41
Interior Department transfer requisitions.....	6,598 38
Fourth Auditor's transfer requisitions.....	1,025 36
War Department transfer requisitions.....	2,048 77

*Report of business transacted in the Third Auditor's office, United States Treasury, in the fiscal year ending June 30, 1871.*

Description of accounts.	Number of accounts remaining on hand June 30, 1870.		Number of accounts received in year ending June 30, 71.		Number of accounts settled in the year ending June 30, 1871.		Number of accounts unsettled June 30, 1871.	
	Monthly and quarterly.	Monthly and quarterly.	Monthly and quarterly.	Amount involved.	Monthly and quarterly.	Amount involved.	Monthly and quarterly.	Amount involved.
Quartermasters' money.....	94	835	665	\$13,984,186 97	284	\$16,362,177 69		
Quartermasters' property.....	10,836	2,285	9,355		3,768			
Commissaries' money.....	1,712	765	3,213	5,904,744 86	1,264	973,405 39		
Pension agents' money.....	726	830	789	32,813,334 28	851	32,658,464 88		
Engineers' money.....	139	210	221	5,947,452 72	128	2,890,675 45		
Refugees, Freedmen and Abandoned Lands money.....	64	42	61	1,245,280 90	45	1,334,156 83		
Refugees, Freedmen and Abandoned Lands property.....	32	178	173		37			
Signal officers' money.....	1	1	2	2,680 90				
Signal officers' property.....	34	463	406		91			
Total.....	13,632	7,739	14,685	50,897,880 03	6,470	54,218,675 16		
Claims for horses lost.....	5,531	340	540	\$104,347 11	5,331	\$938,364 69		
Steamboats destroyed.....	73	12	15	263,002 23	70	604,682 11		
Oregon warrants.....	850	176	204	49,158 83	832	65,615 19		
Miscellaneous.....	4,041	2,335	1,352	7,862,363 44	5,024	4,140,073 80		
State warrants.....	11	13	17	2,034,920 54	7	284,701 73		
Total.....	10,506	2,876	2,128	10,319,792 15	11,254	6,033,437 59		

## QUARTERMASTER'S DIVISION.

The accounts of quartermasters cover a wide and varied range of disbursement and property accountability, embracing disbursements for barracks, quarters, hospitals, store-houses, offices, stables, forage and transportation of all army supplies, army clothing, camp and garrison equipage, the purchase of cavalry and artillery horses, fuel, forage, straw material for bedding, stationery, hired men, per diem to extra-duty men, of the pursuit and apprehension of deserters, of the burial of officers and soldiers, of hired escorts, of expresses, interpreters, spies, and guides, of veterinary surgeons and medicines for horses, of supplying posts with water, and generally the proper and authorized expenses for the movements and operations of an army not expressly assigned to any other department. The "returns" are an account of the disposition made of all property paid for by the Quartermaster's Department, (except



clothing, camp and garrison equipage, which are accounted for by the Second Auditor.)

The tabular statement herewith exhibits in a condensed form the results of the labors of the force employed in this division:

	MONEY ACCOUNTS.			SUPPLEMENTAL SETTLEMENTS.		
	Number.	Amount involved.	Property returned.	Property.	Money.	Amount involved.
On hand per last report, June 30, 1870	94	\$7,219,097 66	13,136			
Received during the current year	655	23,129,066 31	2,285	3,320	1,136	\$9,810,618 85
Total	949	30,348,163 97	15,421	3,320	1,136	9,810,618 85
Reported during the current year	665	\$19,754,186 57	9,375	3,320	1,136	\$9,810,618 85
Remaining unsettled June 30, 1871	284	10,593,977 40	3,706			
Total	949	30,348,163 97	13,121	3,320	1,136	9,810,618 85

	SIGNAL ACCOUNTS.			TOTAL.	
	Property.	Money.	Amount involved.	Number.	Amount involved.
On hand per last report, June 30, 1870	34	1		10,064	\$7,219,097 66
Received during the current year	463	1	\$2,880 90	8,030	32,947,166 06
Total	497	2	2,880 90	18,094	40,129,863 72
Reported during the current year	406	2	\$2,880 90	14,844	\$23,797,686 72
Remaining unsettled June 30, 1871	91			4,140	16,362,177 00
Total	497	2	2,880 90	18,984	40,129,863 72

Number of letters sent out from the division during the year, 50,320; average number of clerks employed, 129½.

#### SUBSISTENCE DIVISION.

This division audits the accounts of all commissaries and acting commissaries of subsistence in the Army, whose duties are to purchase the provisions and stores necessary for the feeding of the Army and see to their proper distribution. These commissaries render monthly money accounts, with proper vouchers, for disbursements of the funds intrusted to them, together with a provision return, and vouchers showing the disposition of provisions and stores purchased and received during each month. These accounts are received monthly through the office of the Commissary General of Subsistence, and are, every six months, (or oftener if the officer ceases to disburse,) examined and audited in this division, and the money accounts and vouchers, together with a certified statement of their condition, referred to the Second Comptroller of the Treasury for his decision thereon. Upon their receipt back from the Comptroller, with the statement approved, the officers are then officially notified of the result of said examinations, and are called upon by this office to adjust or explain any omissions or errors that may have been discovered. The money and provision accounts, together with vouchers and papers belonging thereto, are, after examination, placed in the settled files of this division for future reference, and remain permanently in the custody of this office.

These have been received and registered during the year 2,765 money

accounts of officers disbursing in the Subsistence Department, involving the expenditure of \$5,957,310 68. During the same period 3,213 accounts (containing 52,132 vouchers) were audited and reported to the Second Comptroller of the Treasury, involving the expenditure of \$5,904,744 26.

In connection with the above, there were received and registered during the year 1,935 provision returns, and within the same period 2,931 provision returns (containing 50,744 vouchers) were examined and adjusted.

The number of vouchers contained in the accounts examined was 102,876.

During the year 970 official letters have been written, 576 pages of differences written and copied, and 2,913 queries received and answered.

Average number of clerks engaged upon the division during the year, eight.

#### RECAPITULATION.

	No. of accounts.	Amounts involved.
Remaining on hand June 30, 1870 .....	1,712	\$1,930,838 97
Received during the year ending June 30, 1871 .....	2,765	5,957,310 68
<b>Total</b> .....	<b>4,477</b>	<b>7,878,149 65</b>
Audited and reported to Second Comptroller during the year .....	3,213	5,904,744 26
Remaining unsettled June 30, 1871 .....	1,264	973,405 39

Provision returns on hand June 30, 1870 .....	1,151
Provision returns received during the fiscal year .....	1,935
<b>Total</b> .....	<b>3,086</b>
Provision returns examined during the year .....	2,931
Provision returns remaining on hand June 30, 1871 .....	155

	No. of accounts.	
Money accounts on hand June 30, 1870 .....	1,712	
Provision returns on hand June 30, 1870 .....	1,151	
		2,863
Money accounts received during the fiscal year .....	2,765	
Provision returns received during the fiscal year .....	1,935	
<b>Total</b> .....		<b>4,700</b>
Money accounts audited during the fiscal year .....	3,213	
Provision returns examined during the fiscal year .....	2,931	
		6,144
<b>Total accounts on hand June 30, 1871 .....</b>		<b>1,419</b>

#### ENGINEER DIVISION.

This division is employed in the examination of the accounts of the officers and agents of the Engineer Department, who, under direction of the Chief of Engineers of the Army, (except the Superintendent of the Military Academy at West Point, whose disbursements are directed by the Inspector General,) disburse moneys out of various appropriations—now two hundred and forty-eight in number—made from time to time by Congress for works of a public nature, which may be classed under the following general heads, viz:

The purchase of sites and materials for, and construction and repairs of, the various fortifications throughout the United States;

Construction and repairs of roads, bridges, bridge trains, &c., for armies in the field;

Surveys on the Atlantic and Pacific coasts;

Examination and surveys of the northern and western lakes and rivers;

Construction and repairs of breakwaters;

Repairs and improvement of harbors, both on sea and lake coasts;

Improvement of rivers and purchase of snag and dredge boats for the same; and,

The expenses of the Military Academy at West Point.

The average number of clerks employed on the division for the year ending June 30, 1871, was four; and the transactions of the division for the same period are shown by the following statement, viz:

	ACCOUNTS.		Amounts involved.
	Quarterly.	Monthly.	
On hand June 30, 1870.....	97	42	\$3,980,075 18
Received during the year.....	106	14	4,858,027 99
Total.....	203	56	8,838,103 17
Expended during the year.....	166	55	5,947,452 72
Remaining on hand June 30, 1871.....	127	1	2,890,670 45
Supplemental settlements.....			23
Transfer settlements.....			6

#### STATE WAR CLAIMS DIVISION.

The duties of this division embrace the settlement, under the various acts and resolutions of Congress, of all claims of the several States for costs, charges, and expenses properly incurred by them for enrolling, subsisting, clothing, supplying, arming, equipping, paying, and transporting their troops employed by the United States in aiding to suppress the recent insurrection against the United States. Also claims on account of Indian and other border invasions.

	ORIGINAL ACCOUNTS.		SUSPENDED ACCOUNTS.	
	No.	Amount.	No.	Amount.
On hand June 30, 1870.....	11	\$1,635,026 07	99	
Received during the year.....	13	624,596 20	17	
Total.....	24	2,319,622 27	116	
Expended during the year.....	17	2,034,920 54	30	
On hand June 30, 1871.....	7	284,701 73	86	

## General statement of the claims of the several States filed since July 1, 1861.

States	Amount of claims filed by the States.	Amount paid to States prior to July 1, 1870.	Amount paid to States since July 1, 1870.	Total amount paid to States prior to July 1, 1871.	Amount of unexamined claims.	Amount of suspended claims.	Total balance of unpaid claims.
Maine.....	\$1,304,300 74	\$1,130,048 75	\$1,938 93	\$1,034,987 68		\$283,313 06	\$283,313 06
New Hampshire.....	1,407,401 42	1,006,812 50		1,006,812 50		400,578 92	400,578 92
Vermont.....	1,924,073 81	1,770,460 00		1,770,460 00	10,802 04	125,361 17	125,361 17
Massachusetts.....	3,751,728 10	3,649,644 40		3,649,644 40		102,084 16	102,084 16
Rhode Island.....	702,611 00	757,404 19		757,404 19		5,207 80	5,207 80
Connecticut.....	9,555,955 04	1,737,423 36	306,004 92	2,034,038 98		221,317 66	221,317 66
New York.....	3,282,225 22	2,300,192 50	692,270 10	2,992,471 60		306,853 72	306,853 72
New Jersey.....	1,442,448 51	1,292,003 42	103,246 84	1,395,250 26		57,196 15	57,196 15
Pennsylvania.....	3,172,918 19	2,094,270 78	815,580 33	2,910,415 11		261,749 08	261,749 08
Delaware.....	3,019 30	3,019 30		3,019 30			
Maryland.....	23,979 72	7,162 52		7,162 52		16,817 20	16,817 20
Virginia.....	54,049 41	48,469 97		48,469 97		5,619 44	5,619 44
West Virginia.....	456,879 03	456,638 03		456,638 03		221 00	221 00
Ohio.....	3,906,222 77	2,738,074 04	145,304 60	2,883,378 58	68,224 45	323,443 10	323,443 10
Illinois.....	4,574,298 51	4,006,204 03	30,538 53	4,045,742 56		528,555 20	528,555 20
Indiana.....	3,520,319 41	2,464,364 72	22,255 00	2,486,619 72		1,042,693 63	1,042,693 63
Michigan.....	823,017 38	726,425 23		726,425 23	-59,993 00	46,240 15	46,240 15
Wisconsin.....	1,141,793 81	962,144 15		962,144 15		129,649 66	129,649 66
Iowa.....	1,071,765 94	834,624 27		834,624 27	27,770 48	199,369 25	199,369 25
Minnesota.....	443,692 71	417,827 33	17,724 63	435,551 73		8,020 98	8,020 98
Missouri.....	7,226,978 24	7,220,827 33		7,220,827 33		16,151 01	16,151 01
Kentucky.....	3,560,103 62	2,285,044 06	651,629 07	2,936,673 13		443,427 49	443,427 49
Tennessee.....	12,351 04	9,360 82		9,360 82	129 00	2,990 22	2,990 22
Kansas.....	45,928 11	97,564 32		97,564 32		18,220 67	18,220 67
Nebraska.....	53,628 84	55,228 84		55,228 84			
Colorado.....	163,698 73				168,608 73		168,608 73
Miscellaneous claims					67 00		67 00
Total.....	44,675,997 45	36,982,092 17	2,929,124 05	39,911,136 22	344,624 73	4,429,166 50	4,764,861 23

\* Reported to Second Comptroller June 27, 1871.

## CLAIMS DIVISION.

The duties of this division embrace the settlement of claims of a miscellaneous character, arising in the various branches of service in the War Department, growing out of the purchase or appropriation of supplies and stores for the Army; the purchase, hire, or appropriation of water craft, railroad stock, horses, wagons, and other means of transportation; the transportation contracts of the Army; the occupation of real estate for camps, barracks, hospitals, fortifications, &c.; the hire of employes, mileage, court-martial fees, traveling expenses, communications, &c.; claims for compensation for vessels, railroad cars, and engines, &c., lost in the military service; claims growing out of the Oregon and Washington war of 1855 and 1856, and other Indian war claims; claims of various descriptions under special acts of Congress, and claims not otherwise assigned.

The following statements show the business transacted by this division during the fiscal year ending June 30, 1871, and the condition of the business at the commencement and at the end thereof:

## 1.—Miscellaneous claims.

	Number.	Amounts claimed.	Amounts allowed.
On hand July 1 1870 .....	4,041	\$2,833,027 76	
Received during the year .....	2,335	19,155,409 48	
Total .....	6,376	12,002,437 24	
Disposed of during the year .....	1,352	17,868,363 44	\$1,821,624 43
On hand June 30, 1871 .....	5,024	\$4,140,073 80	

\* The amount is the aggregate claimed in 2,833 cases, the amounts claimed in the others (1,509) not being stated.

\* The amount is the aggregate claimed in 2,150 cases, the amounts claimed in the others (145) not being stated.

\* The amount is the aggregate claimed in 1,509 cases, the amounts claimed in the others (46) not being stated.

\* The amount is the aggregate claimed in 3,753 cases, the amounts claimed in the others (1,571) not being stated.

## 2.—Oregon and Washington Indian War Claims.

	Number.	Amounts claimed.	Amounts allowed.
On hand July 1 1870 .....	650	\$23,606 56	
Received during the year .....	176	131,107 66	
Total .....	1,036	114,774 02	
Disposed of during the year .....	204	24,158 83	\$43,408 50
On hand June 30, 1871 .....	832	\$65,615 19	

\* The amount is the aggregate claimed in 439 cases, the amounts claimed in the others (411) not being stated.

\* The amount is the aggregate claimed in 104 cases, the amounts claimed in the others (72) not being stated.

\* The amount is the aggregate claimed in 136 cases, the amounts claimed in the others (48) not being stated.

\* The amount is the aggregate claimed in 407 cases, the amounts claimed in the others (415) not being stated.

## 3.—Vessels, &amp;c., lost. (Act March 3, 1849.)

	Number.	Amounts claimed.	Amounts allowed.
On hand July 1 1870 .....	51	\$740,644 31	
Received during the year .....	12	156,500 00	
Total .....	63	\$897,144 31	
Disposed of during the year .....	15	\$23,162 21	\$196,537 92
On hand June 30, 1871 .....	50	\$874,002 10	

1,530 letters have been written and 3,510 received.

## HORSE CLAIMS DIVISION.

This division is engaged in settling claims for compensation for losses, sustained by officers and enlisted men, of horses and equipage while in the military service of the United States, and for the loss of horses, mules, oxen, wagons, sleighs, and harness, while in said service, by impressment or contract.

The number of claims received and docketed during the year is 330, in which the aggregate amount claimed is \$75,153 48. The number settled and finally disposed of during the same period (including those received prior to as well as during the year) was 540, in which the aggregate amount claimed was \$104,347 11, and on which the aggregate amount allowed was \$62,193 19. There have been during the year 6,771 letters written, and 2,206 received and docketed; 3,835 claims have been examined and suspended, and 647 briefs made.

The following table presents the condition of the business of this division at the commencement and close of the year, as well as its progress through the year.

	No.	Amount.	No.	Amount.
Claims on hand July 1, 1870.....			5,331	\$965,205 39
Claims received during the year.....			340	75,153 48
Claims reconsidered during the year.....			10	2,353 00
Total.....			5,671	1,042,711 80
Claims allowed during the year.....	395	\$62,193 19		
Rejected on same.....		8,891 02		
Amount claimed.....		71,084 21		
Claims disallowed during the year.....	145	33,202 90		
Deduct as finally disposed of during the year.....			540	104,347 11
Claims on hand unsettled July 1, 1871.....			5,331	938,364 69

## PENSION DIVISION.

The duties devolving upon this division are keeping an account with each Army pensioner of the United States, recording the name, rate, date of commencement, noting every increase, reduction, transfer, re-marriage, death, and expiration, whether by limitation under existing laws, or on account of the disability having ceased. Also, keeping an account with each pension agent, (of whom there are 59,) charging him with all moneys advanced by the Government, under the several appropriations to pay pensions, receive and register the accounts as sent each month direct to this office by the agents who have disbursed the money and properly file them for settlement; examine each voucher, and enter the payment made by the agent on the roll-book opposite the pensioner's name. In addition, the act June 17, 1870, provides that every soldier who lost a limb in the service of the United States may be furnished with the artificial limb every five years, or, if he elect, may receive money commutation in lieu thereof. The bills for limbs furnished, or commutation orders in lieu thereof, as also all bills for transportation of the soldier to and from the place of fitting the limb, are paid by the several agents, and rendered in the same manner as the vouchers for payments to pensioners.

Congress, under act July 8, 1870, changed the mode of paying pensions, and authorized payments to be made quarterly instead of semi-annually, as heretofore. This necessitates nearly double the amount of labor during the year, because twice as many vouchers (about 800,000) are received, examined, noted, filed, audited, and reported by settlement

to the Second Comptroller for revision. The act February 14, 1871, grants pensions to the survivors of the war of 1812. Not many payments were made to this class, and reported in the accounts received during the fiscal year just closed.

The number of pensioners on the rolls at present is about 205,000; number of soldiers who receive commutation in lieu of artificial limbs, 7,707; number who receive limbs, 917; number of transportation orders approved and paid by agents, 1,116.

*Amount drawn from the Treasury to pay pensions during the year ending June 30, 1871.*

Invalids .....	\$12, 340, 544 11
Widows and others .....	21, 791, 340 83
War of 1812, act of February 14, 1871 .....	234, 000 00
<b>Total .....</b>	<b>34, 367, 924 94</b>

*Amount refunded and credited by deposit requisition.*

Invalid .....	\$416, 630 54
Widows and others .....	472, 879 17
<b>Total .....</b>	<b>889, 509 71</b>

The difference of \$4,965,152 79 between the amounts charged and the amount reported as disbursed, is in the agents' hands, to be returned and placed to the credit of the appropriation.

The following tabular statement shows the amount of business disposed of by the pension division during the year ending June 30, 1871:

	Number.	Amount involved.
Accounts on hand July 1, 1870 .....	730	\$36, 858, 536 73
Accounts received during the year .....	830	24, 513, 942 44
<b>Total .....</b>	<b>1, 630</b>	<b>63, 471, 799 17</b>
Accounts reported during the year .....	789	\$32, 813, 334 96
Accounts remaining unsettled June 30, 1871 .....	861	32, 658, 464 69
<b>Total .....</b>	<b>1, 630</b>	<b>63, 471, 799 17</b>

The accounts on file unsettled are divided as follows:

Accounts of 1860 .....	20
Accounts of 1-70 .....	543
Accounts of 1871 .....	299
<b>Total .....</b>	<b>861</b>

Pensions recorded, increased, changes made, including additional for children of \$2 per month .....	53, 794
Pensions transferred .....	8, 241
Pension vouchers examined .....	523, 835
Payments entered on roll-books .....	464, 549
Pages of difference and miscellaneous copied .....	3, 323
Copies of surgeons' certificates furnished Commissioner .....	1, 179
Letters received and registered .....	3, 441
Letters written .....	3 816

The following tabular statement exhibits the amount paid at the

several agencies to pensioners, the accounts of which were received during the year ending June 30, 1871:

State.	Agency.	Agent.	INVALIDS.		Widows and others.
			Invalid.	Artificial limbs.	
Arkansas.....	Fort Gibson.....	Alex'dr Clapperton.	\$24 00	.....	\$851 53
Do.....	do.....	George E. Webster.	1,082 73	.....	4,338 95
Do.....	Little Rock.....	James W. Demby..	193 85	.....	1,677 27
Do.....	do.....	James Coates.....	11,539 46	\$515 00	80,568 80
Connecticut.....	Hartford.....	D. C. Rodman.....	120,938 02	7,532 40	318,257 61
California.....	San Francisco.....	James W. Shanklin.	25,922 42	998 00	26,220 74
District of Columbia	Washington.....	W. T. Collins.....	205,410 86	\$1,883 05	262,846 30
Delaware.....	Wilmington.....	Edward D. Porter..	22,868 03	1,850 00	30,044 05
Indiana.....	Fort Wayne.....	Hiram Iddings.....	202,365 62	5,521 10	274,907 32
Do.....	Indianapolis.....	C. W. Brouse.....	403,472 77	10,360 50	717,948 65
Do.....	Madison.....	Mark Tilton.....	130,050 54	5,308 00	273,995 59
Illinois.....	Chicago.....	Benjamin J. Sweet..	865,537 02	14,361 50	395,597 63
Do.....	do.....	D. Blakeley.....	2,680 51	248 88	2,853 18
Do.....	Quincy.....	B. M. Prentiss.....	174,032 43	4,500 50	252,449 29
Do.....	Springfield.....	William Jayne.....	297,414 53	7,369 86	354,081 26
Do.....	Salem.....	James S. Martin.....	231,215 87	7,921 30	637,604 63
Iowa.....	Des Moines.....	Stewart Goodwell..	91,485 24	3,229 20	195,453 34
Do.....	Fairfield.....	D. B. Wilson.....	128,812 65	4,730 85	225,369 13
Do.....	Marion.....	Joseph B. Young.....	138,001 50	4,669 83	230,439 65
Kansas.....	Topeka.....	Charles B. Lines.....	93,793 11	2,385 00	125,925 63
Kentucky.....	Lexington.....	A. H. Adams.....	44,297 42	1,150 00	193,539 45
Do.....	Louisville.....	Samuel McKee.....	109,257 43	4,650 00	388,050 09
Do.....	do.....	W. D. Gallagher.....	0,059 13	350 00	18,098 08
Louisiana.....	New Orleans.....	F. J. Kapp.....	25,789 17	1,741 00	43,606 41
Do.....	do.....	R. H. Isabel.....	1,473 93	185 00	3,275 75
Maine.....	Augusta.....	H. Boynton.....	147,652 30	8,006 50	228,917 34
Do.....	Bangor.....	Gideon Mayo.....	290,886 25	5,434 25	207,046 77
Do.....	do.....	S. B. Morrison.....	8,675 74	496 50	10,583 97
Do.....	Portland.....	M. A. Blanchard.....	173,559 65	5,876 30	246,223 43
Massachusetts.....	Boston.....	G. C. Trumbull.....	512,995 04	27,917 06	885,880 27
Maryland.....	Baltimore.....	H. Adreon.....	140,287 67	7,873 80	217,163 34
Michigan.....	Detroit.....	Henry Barnes.....	360,713 11	14,165 91	607,826 53
Do.....	Grand Rapids.....	T. Foote.....	88,622 05	4,076 45	132,697 21
Missouri.....	Macon City.....	John T. Clements.....	73,924 23	1,430 00	146,827 71
Do.....	do.....	W. C. Ebert.....	42,692 42	1,264 50	61,948 12
Do.....	St. Louis.....	James Lindsay.....	181,548 04	1,599 00	448,286 11
Minnesota.....	St. Paul.....	H. C. Rogers.....	106,983 70	2,757 97	158,669 01
New Hampshire.....	Concord.....	David Cross.....	167,436 12	7,134 33	226,217 20
Do.....	Portsmouth.....	D. J. Vaughan.....	40,519 80	2,150 00	74,341 45
New York.....	Albany.....	S. H. H. Parsons.....	769,275 02	30,769 75	1,251,402 63
Do.....	Canandaigua.....	L. M. Drury.....	529,809 12	28,791 79	751,516 54
Do.....	Brooklyn.....	D. W. Haynes.....	60,234 22	6,784 75	113,647 09
Do.....	do.....	John Hall.....	19,423 26	1,318 10	38,593 57
Do.....	New York City.....	G. M. Van Buren.....	386,735 51	31,287 34	570,917 46
Do.....	do.....	W. H. Lawrence.....	.....	.....	77,955 61
Do.....	do.....	L. L. Doty.....	.....	.....	352,763 91
New Jersey.....	Trenton.....	James F. Rusling.....	218,217 28	14,085 10	66,237 63
North Carolina.....	Raleigh.....	C. H. Pelvin.....	10,341 87	322 70	11,781 66
Nebraska.....	Omaha.....	E. A. Allen.....	14,727 39	268 00	0,865 40
New Mexico.....	Santa Fe.....	E. W. Little.....	2,470 97	20 25	.....
Ohio.....	Cincinnati.....	William E. Davis.....	448,625 40	21,206 09	776,230 94
Do.....	Cleveland.....	Seth M. Barber.....	290,013 80	11,462 30	416,969 54
Do.....	Columbus.....	John A. Norris.....	268,984 17	12,750 55	531,525 95
Oregon.....	Oregon City.....	Henry Warren.....	2,705 86	12 20	6,648 31
Pennsylvania.....	Philadelphia.....	W. T. Forbes.....	1,232,562 75	57,350 17	1,485,065 77
Do.....	do.....	A. R. Calhoun.....	.....	.....	527,671 96
Do.....	Pittsburg.....	James McGregor.....	351,487 15	21,171 04	49,746 91
Rhode Island.....	Providence.....	Wm. H. Townsend.....	21,319 71	929 13	51,123 45
Do.....	do.....	C. R. Brayton.....	22,298 33	2,509 20	356,017 98
Tennessee.....	Knoxville.....	D. T. Boynton.....	85,297 12	1,335 15	182,397 30
Do.....	Nashville.....	W. J. Stokes.....	37,942 75	1,372 50	147,816 14
Vermont.....	Burlington.....	J. L. Barstow.....	95,079 72	5,798 20	164,253 09
Do.....	St. Johnsbury and Montpelier.....	Stephen Thomas.....	119,167 31	5,636 80	.....
Virginia.....	Richmond.....	James T. Sutton.....	7,807 79	225 00	11,674 69
Do.....	do.....	Andrew Washburn.....	11,820 57	1,025 00	25,190 59
West Virginia.....	Wheeling.....	J. M. Doddridge.....	96,275 37	4,450 00	220,033 35
Do.....	do.....	T. M. Harris.....	48,307 52	2,252 10	91,152 81
Wisconsin.....	La Crosse.....	John A. Kellogg.....	55,799 87	1,992 20	104,057 64
Do.....	Milwaukee.....	Edward Ferguson.....	164,533 64	9,908 00	229,249 01
Do.....	Madison.....	Thomas Reynolds.....	110,147 89	0,005 35	203,381 63
Washington Ter.....	Vancouver.....	S. W. Brown.....	1,553 13	99 44	439 42
Total.....	.....	.....	10,421,418 55	482,110 36	17,638,341 31



The force employed in this division during the year consisted of twenty-two clerks and two copyists.

The business of this division has increased more than double, and as many of the accounts are behind in settlement, it will necessitate the addition of quite a force in order to dispatch business as promptly as it should be; this addition, however, will be made by transfer from other divisions in this office.

#### BOUNTY LAND DIVISION.

During the year ending 30th June, 1871, two thousand six hundred and thirty-four (2,634) bounty land claims have been examined and returned to the Commissioner of Pensions, properly certified.

Three hundred and thirty-nine (339) letters have been written on subjects connected with the division.

Nine (9) invalid pension claims, war of 1812, have been properly certified to the Commissioner of Pensions for his action.

Two thousand and ninety-nine (2,099) pension claims, war of 1812, act of Congress of February 14, 1871, have been examined and properly certified to the Commissioner of Pensions, for his action.

#### REFUGEES, FREEDMEN AND ABANDONED LANDS DIVISION.

The duties of this division embrace the settlement of the accounts of the agents and officers of the Bureau of Refugees, Freedmen and Abandoned Lands, for moneys expended by said agents and officers for stationery and printing, quarters and fuel, commissary stores and medical supplies, transportation, rents, repairs and building of schools and asylums, pay of superintendents of schools, clerks, agents, and officers of the bureau, telegraphing, and postage. Also incidental expenses, such as the necessary employment of colored laborers with a view to ameliorate their condition.

	MONEY ACCOUNTS.		No. of property accounts.
	No.	Amount.	
On hand June 30 1870 .....	64	\$1,579,071 47	32
Received during the year .....	42	700,366 36	178
Total .....	96	2,279,437 73	210
Expended during the year .....	61	1,245,240 90	173
On hand June 30 1871 .....	45	1,334,156 83	37

Number of letters written, 35; number of clerks employed, 2.

#### REGISTRY DIVISION.

To provide for the correct and prompt settlement of accounts and for the certification of the indebtedness to the United States of disbursing officers, whose accounts are audited in this office, and of persons having claims upon the Government, all such officers are required, by order of the Second Comptroller, dated March 30, 1867, to transmit direct to this office copies of their monthly accounts current, abstract of funds transferred, and return of revenue tax deducted in making payments to Government employes, within ten days after the expiration of each successive month; and further, to guard the Treasury, it is made the duty of this division to report quarterly all officers of the United States Army who

have received, by transfer, funds pertaining to the Quartermaster's and Subsistence Departments and failed to account for the same within three months from the date of their receipt to the Second Comptroller, in conformity with instructions from him, dated July 21, 1869, based on the law of January 25, 1828, (4 Stat., p. 246,) which provides "that no money hereafter appropriated shall be paid to any person for his compensation who is in arrears to the United States until such person shall have accounted for and paid into the Treasury all sums for which he may be liable."

In conformity with the foregoing there have been received, acknowledged, indorsed, registered, and filed 8,306 accounts current, to wit: Commissary, 3,556; Quartermasters', 2,829; Engineer, 1,439; Pension, 648; Bureau of Refugees, Freedmen and Abandoned Lands, 53; returns of revenue tax, abstracts of money transferred to disbursing officers, and other miscellaneous papers received, acknowledged, indorsed, recorded, and filed, 1,368; letters received, 168; letters written to officers, 255; receipts for money transferred, recorded, 3,911; queries relative to the indebtedness of officers, answered, 2,853; disbursing officers reported to the Second Comptroller as delinquent in the rendition of their accounts, 298.

#### COPYISTS' SECTION.

During the fiscal year ending June 30, 1871, the female copyists of this office, eight in number, have copied and compared 42,254 pages of manuscript, copied 4,758 and compared 7,690 letters, registered 827 money differences, 4,000 property differences, and 1,278 miscellaneous papers.

#### THE FILES.

Your attention is again respectfully invited to the urgent and constantly increasing demand for more file room in this office. The additional room referred to in my previous report as being fitted up for file purposes has been completed, and all the available space in it already filled with accounts examined during the past fiscal year. There now remains only about six hundred lineal feet of shelving available in the large file rooms of the office, which space will probably be filled before the 1st of January, 1872. These rooms, which contain the great bulk of the files of the office, are very unsuitable for the purpose, being located directly under the roof, without side windows or other proper means of ventilation. In summer they are intensely hot, while in winter they are extremely cold and uncomfortable, as they cannot be properly heated, being disconnected from the arrangements for heating other portions of the building. The rooms now occupied by part of the clerical force of this office, in the oldest portion of the eastern front of the building, are more suitable for file rooms than for clerical duty, and could be converted into file rooms as occasion and the necessities of the office require, provided other rooms be furnished for the clerks now occupying them. I have, therefore, to request that rooms capable of accommodating at least twenty clerks be assigned to this Bureau at as early a day as possible, to enable the clerks to vacate some of the rooms referred to and have them converted into file rooms. Otherwise, room for the constantly increasing files of the Bureau must be furnished in some other portion of the Department building, which would be less accessible and consequently inconvenient, and be the cause of great delay and confusion in the transaction of business.

It will be seen from the foregoing statements that the amount drawn from the Treasury through this office during the last fiscal year was \$63,501,843 58, most of which (\$34,367,924 94) was for pensions. The amount drawn during the previous fiscal year was \$91,107,151 58. The number of money accounts of disbursing officers settled was 4,940, involving the sum of \$59,897,880 03, and claims adjusted was 2,128, involving \$10,319,792 15, making a total of \$70,217,672 18 adjusted during the fiscal year, excluding 12,865 property and provision returns, which were adjusted, and in which were involved large disbursements made for the Army during the war. During the year the accounts of many Army officers have been closed under the provisions of the act approved June 23, 1870, to authorize the settlement of the accounts of officers of the Army and Navy for losses of funds, vouchers, and property during the war of the rebellion. It will be seen that the number of money accounts unadjusted on the 30th June, 1871, was 2,582, involving \$54,218,875 16, and the number of property and provision returns was 4,049. The number of unsettled claims was 11,254, involving \$6,033,437 52, though this latter sum does not embrace all the demands against the Treasury on file, as, in a large number of claims filed, the amount claimed is not stated.

Having worked off so much of the old business of the office, and in the expectation that the business remaining on hand at the close of the fiscal year can be still further reduced, if not entirely disposed of, with the force now engaged upon the work during the present fiscal year, I believe I can safely recommend a reduction in the clerical force of this Bureau for the next fiscal year of thirty-five clerks of class one, thus effecting a saving of \$42,000. But in connection with this proposed reduction I would again most earnestly call attention to recommendation in my report of last year for an increase in the salaries of the chiefs of divisions in this Bureau, and respectfully submit that the salary of the chief clerk of this office should be increased to \$2,800 per annum, and that the salaries of the chiefs of the following-named divisions be increased to \$2,400 each, viz: quartermasters', subsistence, pension, claims, horse claims, engineers', war of 1812 and bounty land, book-keepers', State war claims.

Seven of the above-named chiefs of division are now fourth-class clerks; the other two are third-class clerks. The proposed increase would, therefore, amount to \$6,600, leaving a net saving of \$35,400 on clerk-hire. The gentlemen filling these positions are necessarily called upon to perform more work than falls to the share of other clerks. I hold them to a strict accountability for the conduct and business of their respective divisions, and I respectfully submit that as the success of my proposed reduction in the force depends largely upon the ability and hearty coöperation of these gentlemen, and in view of the responsibility and importance of their duties, as well as of the fact that they will be compelled to perform much additional labor, that the interests of economy will be advanced by making the increase asked for.

In conclusion I feel it my pleasant duty to bear testimony to the general good character of the employes of this Bureau, both ladies and gentlemen, and also to the earnest and faithful manner in which they have performed their respective duties during the past fiscal year.

Respectfully submitted.

ALLAN RUTHERFORD, *Auditor.*

Hon. GEORGE S. BOUTWELL,  
*Secretary of the Treasury.*

## REPORT OF THE FOURTH AUDITOR OF THE TREASURY.

TREASURY DEPARTMENT,  
Fourth Auditor's Office, September 30, 1871.

SIR: In accordance with your request, and for your observation, I herewith give you a concise statement of the business which has been transacted in this office during the fiscal year ending June 30, 1871.

In making this synopsis I shall pursue the same course which I followed when submitting my last annual report, and shall exhibit the work of the office by a series of tabular statements, one for each of the divisions. These I shall present consecutively, as follows:

## I.—PAYMASTER'S DIVISION, WILLIAM CONARD, CHIEF.

*Statement of accounts received and settled in the Paymaster's Division from July 1, 1870, to June 30, 1871, with the amount of cash disbursed in those settled, and the number of letters received and written in relation to the same, including marine and pension accounts.*

## PAYMASTER'S AND MARINE ACCOUNTS.

Date.	Accounts received.	Accounts settled.	Letters received.	Letters written.	Cash disbursements.
1870.					
July .....	50	43	185	309	\$2,423,947 99
August .....	32	36	276	399	1,554,045 55
September .....	13	14	232	226	463,499 85
October .....	39	29	208	215	404,285 50
November .....	30	32	257	256	1,056,612 73
December .....	17	24	133	131	1,104,000 30
1871.					
January .....	35	33	127	156	2,364,994 06
February .....	30	35	198	133	661,673 55
March .....	36	42	139	190	1,678,110 19
April .....	52	43	100	141	1,638,323 55
May .....	32	37	143	300	1,220,646 67
June .....	24	28	138	171	1,425,536 09
Total .....	300	306	2,111	2,277	16,973,674 75

Number of unsettled accounts on hand July 1, 1870, 19; number of unsettled accounts on hand June 30, 1871, 13; average number of clerks employed in the division, 16; number of pension accounts settled, 225; cash disbursements, \$462,030 55.

*Statement showing the amount disbursed at the different agencies.*

## PENSION ACCOUNTS.

Location.	Invalid.	Widows and orphans.	Total.
Baltimore, Maryland .....	\$3,189 68	\$7,378 30	\$10,568 98
Boston, Massachusetts .....	35,592 21	62,854 94	98,447 15
Cincinnati, Ohio .....	4,562 42	14,159 27	18,721 69
Chicago, Illinois .....	5,914 64	7,083 91	13,008 55
Detroit, Michigan .....	596 72	2,011 34	2,608 07
Hartford, Connecticut .....	470 50	2,325 60	2,796 10
Louisville, Kentucky .....	1,022 65	5,493 95	6,516 60
Milwaukee, Wisconsin .....	1,415 50	1,118 53	2,534 03
New Orleans, Louisiana .....	2,331 15	4,327 70	6,658 85
New York, New York .....	46,147 71	90,793 54	136,941 25
Pittsburgh, Pennsylvania .....	3,543 40	7,963 97	11,507 37
Philadelphia, Pennsylvania .....	16,368 74	45,192 56	61,561 30
Portsmouth, New Hampshire .....	4,317 45	5,979 20	10,296 65
Providence, Rhode Island .....	1,020 34	5,196 28	6,216 62
Richmond, Virginia .....	2,186 14	11,468 93	13,655 07
San Francisco, California .....	369 70	840 00	1,209 70
St. Louis, Missouri .....	1,858 62	2,577 90	4,436 52
St. Paul, Minnesota .....	97 80	.....	97 80
Trenton, New Jersey .....	1,220 56	6,478 94	7,709 50
Washington, District of Columbia .....	8,213 53	30,950 11	39,163 64
Total .....	130,506 65	322,511 90	453,018 55

## II.—RECORD DIVISION—CHARLES COOK, CHIEF.

*Statement of the correspondence of the Fourth Auditor's Office for the fiscal year ending June 30, 1871, and the work of the record division.*

Date.	Letters received.	Letters written.	Letters recorded.	Letters filed.	Letters referred to other bureaus.	Letters indexed.	Names indexed and double indexed.	Number of reported accounts recorded and indexed.	Licenses registered.	Dead letters registered.	Letters written by record division.
<b>1870.</b>											
July.....	1,220	1,515	1,331	832	8	2,200	2,839	198	18	16	186
August.....	1,354	1,580	1,641	1,037	12	1,708	3,720	103	12	9	179
September.....	1,131	1,456	1,587	758	30	1,081	1,988	123	6	28	122
October.....	1,184	1,489	1,326	826	11	3,668	6,078	69	.....	39	122
November.....	1,221	1,330	1,402	909	4	4,323	8,433	85	2	11	152
December.....	1,176	1,391	1,383	812	16	5,013	8,228	30	1	12	83
<b>1871.</b>											
January.....	1,181	1,617	1,641	906	18	.....	.....	6	11	12	90
February.....	1,142	1,367	1,080	828	21	5,290	9,181	.....	2	11	196
March.....	1,460	1,580	1,615	1,006	20	5,745	10,991	139	.....	4	158
April.....	1,306	1,725	1,508	867	11	5,223	10,424	106	5	12	74
May.....	1,227	1,273	1,324	799	20	3,427	6,206	94	1	26	82
June.....	1,074	1,594	1,436	787	11	2,900	4,540	282	.....	30	49
<b>Total.....</b>	<b>14,578</b>	<b>17,718</b>	<b>17,583</b>	<b>10,467</b>	<b>182</b>	<b>40,576</b>	<b>73,808</b>	<b>1,235</b>	<b>58</b>	<b>181</b>	<b>1,419</b>

Average number of clerks employed, 7½.

## III.—PRIZE MONEY DIVISION—S. M. B. SERVOS, CHIEF.

*Statement of work performed by the Prize Money Division during the fiscal year ending June 30, 1871.*

Date.	Prize lists.			Letters.		Claims.		Prize money.
	Number of prize lists received.	Number of prize lists made up.	Amount of prize money for distribution.	Number of letters received.	Number of letters written.	Number of claims received.	Number of claims settled.	Amount of prize money paid.
<b>1870.</b>								
July.....	.....	.....	.....	246	442	322	268	\$12,997 77
August.....	.....	14	\$21,325 36	287	362	46	46	6,033 12
September.....	1	14	11,660 15	242	375	41	35	2,635 92
October.....	.....	.....	.....	279	356	41	39	5,976 83
November.....	.....	.....	.....	243	270	360	333	15,370 25
December.....	.....	.....	.....	238	233	91	72	4,910 81
<b>1871.</b>								
January.....	.....	.....	.....	247	519	318	307	12,583 07
February.....	.....	.....	.....	273	340	294	270	27,907 54
March.....	.....	.....	.....	389	435	147	114	54,627 27
April.....	.....	.....	.....	272	604	199	158	18,276 55
May.....	.....	.....	.....	261	294	186	142	21,674 07
June.....	1	.....	.....	223	468	99	74	2,799 53
<b>Total.....</b>	<b>2</b>	<b>28</b>	<b>33,185 51</b>	<b>2,290</b>	<b>4,808</b>	<b>2,154</b>	<b>1,850</b>	<b>186,222 63</b>

Average number of clerks employed, 3½.

## IV.—GENERAL CLAIM DIVISION—A. C. ADAMSON, CHIEF.

*Annual report of the General Claim Division for the fiscal year ending June 30, 1871.*

Date.	Claims received.	Claims adjusted.	Am't involved.	Letters written.	No. of reports on applications for pensions.	No. of reports on applications for bounty land.	No. of reports on applications for admission to naval asylum.
On hand July 1, 1870 .....	254						
July .....	131	122	\$60,702 42	409	9		
August .....	134	159	42,434 73	485	4	1	1
September .....	77	153	37,220 17	483	10		1
October .....	124	154	15,847 89	564	21	3	
November .....	125	175	24,097 74	530	27	3	
December .....	307	162	23,478 57	555	32		2
1871.							
January .....	188	190	27,801 76	544	22	1	1
February .....	103	125	18,884 22	442	20		1
March .....	123	138	27,144 61	479	17		
April .....	138	136	18,089 12	530	16	1	2
May .....	115	145	19,691 34	423	18		3
June .....	132	193	18,626 52	519	37		
Total .....	1,971	1,852	334,019 09	6,053	233	9	11

Average number of clerks employed, 64.

## V.—NAVY AGENT'S DIVISION—WILLIAM F. STIDHAM, CHIEF.

*Annual report of the Navy Agent's division for the fiscal year ending June 30, 1871.*

Date.	Accounts received.	Accounts settled.	Amount involved.	Letters written.	Letters received.
1870.					
July .....	46	43	\$56,213 00	18	24
August .....	40	38	485,258 43	26	33
September .....	12	12	960,113 62	11	6
October .....	10	10	504,699 41	13	16
November .....	101	101	420,746 43	72	85
December .....	169	169	258,827 86	150	127
1871.					
January .....	100	99	315,918 62	142	136
February .....	25	26	731,237 97	137	140
March .....	18	19	441,205 64	135	143
April .....	39	38	1,500,086 88	128	120
May .....	57	57	899,004 80	115	112
June .....	13	16	341,680 08	103	137
Total .....	630	628	\$6,304,992 76	1,050	1,089

## ALLOTMENT ACCOUNTS.

Date.	Allotments registered.	Allotments discontinued.
1870.		
July .....	21	72
August .....	79	114
September .....	66	60
October .....	121	60
November .....	23	78
December .....	115	79
1871.		
January .....	94	68
February .....	41	75
March .....	139	93
April .....	49	106
May .....	34	80
June .....	55	133
Total .....	837	1,080

*Statement of amount paid by Navy Agents for allotments during the year 1870.*

New York.....	\$62,837 00
Boston.....	36,966 50
Philadelphia.....	45,065 25
Washington.....	21,602 00
Baltimore.....	7,726 00
Portsmouth.....	7,166 00
San Francisco.....	2,688 00

Total..... 184,070 75

Accounts remaining on hand June 30, 1871, 2; average number of clerks employed, 84; number of vouchers examined, 24,481.

## VI.—BOOK-KEEPER'S DIVISION—PARIS H. FOLSOM, CHIEF.

*Statement of the work performed in the Book-keeper's Division for the fiscal year ending June 30, 1871.*

Date.	Cash pay requisitions.		Cash repay requisitions.		Accounts entered and balanced.	Summary statements entered.	Expenditure abstracts entered.	Appropriation accounts settled.	Letters received.	Letters written.
	No.	Amount.	No.	Amount.						
1870.										
July .....	140	\$1,500,220 39			117			1		161
August .....	130	1,856,960 13	25	\$117,547 06	146			6	85	209
September .....	116	1,536,634 10	17	15,712 09	29			4	120	239
October .....	153	1,627,530 66	9	47,473 60	91				115	249
November .....	79	1,265,236 33	40	537,371 00	54				67	59
December .....	96	2,296,315 63	9	28,000 54	46			2	93	137
1871.										
January .....	138	2,667,950 30	6	99,419 50	131				117	164
February .....	107	1,371,700 56	8	240,152 40	153	44		1	101	145
March .....	135	1,554,308 07	28	919,751 84	83	25	98	24	144	167
April .....	110	1,375,508 92	11	37,509 38	110	37		18	120	158
May .....	89	2,774,909 17	14	16,297 99	188	35	35	1	111	150
June .....	137	1,364,177 18	12	94,027 07	78	52	30		123	194
Total .....	1,442	20,709,300 84	179	2,153,162 47	1,225	213	163	57	1,216	2,032

Internal Revenue returned and carried to that fund, \$24,811 15; Navy Hospital fund returned and carried to that fund, \$7,561 57; Navy Pension fund returned and carried to that fund, \$56 58; average number of clerks employed, 44.

## VII.—DISBURSEMENT AND MISCELLANEOUS DIVISION—B. P. DAVIS IN CHARGE.

*Statement of work performed during the fiscal year ending June 30, 1871.*

Number of letters written.....	946
Number of dead letters registered.....	181
Number of licences registered.....	58
Number of checks against accounts ordered.....	211

In addition to the above, Mr. Davis has made up various tabular statements and miscellaneous reports called for by Congress and the Secretary of the Treasury; kept the record of appointments, resignations, removals, and absences; received and distributed the stationery used by the office, and discharged the duties of disbursing clerk.

An inspection of these tables will show that a commendable amount of work has been performed during the last fiscal year, and the experience and facility of the clerks have insured that correctness and promptitude which result from familiarity with the operations required. The various chiefs of divisions are perfectly conversant with the work respectively committed to their supervision, and they have transacted it in the most

satisfactory manner. I can say, as I did in my previous report, that it gives me pleasure to speak in terms of just and cordial commendation of the competent and gentlemanly clerks who compose this office. Their accord with each other, their courtesy of deportment, and the amount of work they have performed, are worthy of praise. As heretofore, William B. Moore, esq., my chief clerk, by his constant attention to his duties, and his knowledge of them, has been of great assistance to me in the affairs of the office.

In the Paymaster's Division there have been a large number of old accounts of disbursing officers resettled, requiring unusual trouble and care, owing to the fact that in many cases their period of service was prior to the rebellion, when the laws regulating such accounts were different from those now existing. A thorough examination of all old accounts which have accumulated on the books of the office has been prosecuted, and wherever balances are found due the Government, correspondence has been entered into with the parties or their sureties, and where possible the amounts have been collected. Where this has not been done, the accounts have been prepared for suit and transmitted to the Solicitor of the Treasury.

The work of the Paymaster's Division has assumed such a shape that current accounts are settled *almost immediately* upon their reception, thereby speedily detecting any errors or discrepancies, and resulting in a benefit not only to the Government, but to the disbursing officer.

The allotment business has been transferred from the Paymaster's Division to the Navy Agent's Division, and an entirely new system of checks devised to insure the proper deduction being made from the allotments' pay on board the vessels of the Navy, to offset the amounts paid on shore for the support of their families. This plan will greatly simplify the adjustment of the accounts of the paymasters and navy agents, and prevent the complications which have heretofore made them so difficult of settlement. The new system will also insure the prompt correction of an error at the time of its commission, and obviate the necessity of waiting, as heretofore, until the cruise is ended and the account of the paymaster registering the allotment is settled.

The experience of the last fiscal year has demonstrated the great value of the "adjustment appropriation account," referred to in my last annual report. Disbursements on account of the Navy necessarily assume a character different from those of any other branch of the Government, from the fact that a large portion of them are made beyond the limits of the United States, and at points remote from the Treasury. It is the practice of paymasters doing duty abroad to draw such funds as may be needed, from a single appropriation only, and to disburse them partly for the benefit of various other appropriations. That is, they borrow from one appropriation to loan to others, as the necessities of the service may require. The adjustment of these transactions devolves upon this office in the settlement of the paymaster's final account, and since his term of service is about three years, it is evident that a considerable time must elapse between the expenditure and the refunding of the amount to the proper appropriation. It has therefore frequently happened that when it was desired to thus refund the amounts involved between appropriations, transfers could not be made, because the appropriation to be drawn from was exhausted. Hence have arisen a large number of unadjusted balances. At the last settlement these transactions had reached the enormous sum of \$8,948,930 04, from accounts settled mostly during the past year. Of this sum upwards of \$2,500,000 cannot be returned to the appropriations from which it was borrowed, for the reason above stated. Of the remainder, upward of \$2,000,000 should be adjusted upon the state-



ment of the last appropriation adjustment account, but it may safely be said that a large portion of this cannot be transferred, on account of the present demands on the appropriation being equal to the balance on hand. Inasmuch as these balances will stand perpetually upon the ledgers of this office, unless authority by law is afforded for closing them, and since this will involve no draft of money from the Treasury, I would earnestly recommend that Congress be asked to make such provision as will authorize their final adjustment. In the future there will be no cause for this difficulty. The transactions above referred to not appearing upon the appropriation ledgers, nor upon those either of the Navy or Treasury Departments, and in order to remedy a recurrence of such a condition of accounts, I have instituted the plan of requiring a monthly detailed statement from every paymaster having funds to account for. This statement exhibits fully the source from which all funds are derived, how they were disbursed, and the exact balance on hand at the end of the month. Through it the transfers between appropriations will be effected in the same quarter of the fiscal year in which the expenditure occurs, and thus the overdrawing of any appropriation prevented.

The adoption of the plan of a full cash statement, each month, from every paymaster having public money on hand, serves to accomplish another useful purpose. Most, if not all, the defalcations which have occurred in the naval service, were accomplished through the ability of the paymaster to obtain a larger amount of funds than his rate of expenditure required. Knowing that he would not be called upon for his surplus until after the expiration of his three years' cruise and the further time necessary to pass his accounts through the accounting officers, he was tempted to use the public money for private speculation, with the hope that he could make a successful operation and return the money thus used before the day of accountability. Under the present arrangement the amount of money each paymaster has on hand is known monthly. Should his requisitions upon the Treasury appear to exceed his requirements, payment can be suspended; and upon rendering his final return the balance he should have on hand, and which he will be required to turn back into the Treasury without delay, will be definitely known.

But there is no absolute safeguard against dishonesty. Although it gives me pleasure to testify from personal acquaintance, and through official connection for a number of years, to the high character of those composing the pay corps of the Navy; and although the amount that has been lost to the Government through Navy paymasters is insignificant compared with the vast number of millions disbursed by them during and since the war, yet it is my opinion that the chances of loss to the Government should be reduced to the last possible degree by the introduction of such methods as will tend to prevent the misuse of its money by its agents.

As an important step in this direction, I would earnestly recommend that Congress enact a law authorizing the employment of not less than three persons, experts in Navy accounts, to be styled accounting agents. These persons should be attached to, and under the direction of, this Bureau. Their duties should be similar to those of the bank examiners now employed in connection with the national banks, and they should have authority to call upon any paymaster, whether on shore or upon any naval vessel, without previous notice, to exhibit his books and cash for examination. They should be paid a reasonable salary, and allowed actual traveling expenses. There is no doubt but that the small outlay thus incurred would save the Government many fold, by presenting a constant check upon any officers disposed to use its funds unlawfully,

especially in those positions where remoteness from executive authority lessens the sense of direct accountability.

With the highest esteem, I have the honor to be, very respectfully,  
your obedient servant,

STEPHEN J. W. TABOR,  
*Auditor.*

Hon. GEORGE S. BOUTWELL,  
*Secretary of the Treasury.*

## REPORT OF THE FIFTH AUDITOR OF THE TREASURY.

TREASURY DEPARTMENT,  
*Fifth Auditor's Office, Washington, November 16, 1871.*

SIR: I have the honor to submit herewith the tabular statements of the operations of this office for the fiscal year ending June 30, 1871, per schedules from A to S inclusive, and also the statements of expenses of assessing and collecting internal revenue for the fiscal year ending June 30, 1870, which were not ready at the date of the last annual report.

The number of accounts adjusted during the fiscal year is eighteen thousand four hundred and four, involving the sum of \$820,208,679 60, and the number of letters written is eighteen thousand four hundred and thirty-six. The number of accounts adjusted for the previous fiscal year was eleven thousand nine hundred and eighty-six, and the number of letters written seven thousand two hundred and fifty-six. I take pleasure in commending the several clerks and employes of the office for uniform good department and general faithfulness in the discharge of their important and responsible duties.

I have the honor to be, very respectfully, your obedient servant,  
J. B. MANN,  
*Acting Auditor.*

Hon. GEORGE S. BOUTWELL,  
*Secretary of the Treasury.*

A.—Statement of the expenses of all missions abroad, for salaries, contingencies, and loss by exchange, from the 1st of July, 1870, to the 30th of June, 1871, as shown by accounts adjusted in this office.

No.	Mission.	Salary.	Contingencies.	Loss by exchange.	Total.
ARGENTINE REPUBLIC.					
1	R. C. Kirk, minister.....	\$7,500 00	\$225 75	\$100 00	\$7,825 75
AUSTRIA.					
2	John Jay, minister.....	12,000 00	932 53		
3	J. F. DeLaplaine, secretary of legation.....	1,800 00			
		13,800 00	932 53		14,732 53
BELGIUM.					
4	J. R. Jones, minister.....	7,500 00	560 51		8,060 51
BRAZIL.					
5	H. T. Blow, late minister.....	7,400 00	446 92	155 19	
6	J. R. Partridge, minister.....				
7	Clinton Wright, chargé.....	4,235 43	50 00		
		11,635 43	496 92	155 19	12,307 54
BOLIVIA.					
8	L. Markbreit, minister.....	7,500 00	226 40	256 50	7,982 90

## A.—Statement of the expenses of all missions abroad, &amp;c.—Continued.

No.	Mission.	Salary.	Contingen- cies.	Loss by exchange.	Total.
<b>CHILL</b>					
1	J. P. Root, minister.....	\$5,434 78	\$113 80	\$116 66	
2	J. C. Caldwell, acting minister.....	497 23	218 90	25 00	
		5,932 06	332 70	141 66	\$6,406 42
<b>CHINA.</b>					
11	F. F. Low, minister.....				
12	S. W. Williams, secretary of legation.....	4,739 01		836 31	5,575 32
<b>COLOMBIA.</b>					
13	S. A. Harbut, minister.....				
<b>COSTA RICA.</b>					
14	J. B. Blair, minister.....	7,500 00	270 02	431 83	8,201 85
<b>DENMARK.</b>					
15	G. H. Yeaman, late minister.....	3,444 29	130 61		
16	M. J. Cramer, minister.....	6,073 37	250 09	95 60	
		9,517 66	380 70	95 60	9,993 96
<b>ECUADOR.</b>					
17	E. R. Wing, minister.....	7,500 00	702 91	935 14	9,138 05
<b>FRANCE.</b>					
19	E. B. Washburne, minister.....	17,500 00	3,738 95	29 07	
21	W. Hoffman, secretary of legation.....	2,650 00	32 07	30 43	
20	F. Moore, assistant secretary of legation.....	2,000 00			
		22,150 00	3,771 02	59 49	25,980 51
<b>GERMAN EMPIRE.</b>					
21	George Bancroft, minister.....	12,000 00	2,160 37		
22	Alexander Bliss, secretary of legation.....	3,050 83			
23	Nicholas Fish, assistant secretary of legation.....	1,800 00			
		16,850 83	2,160 37		19,011 20
<b>GREAT BRITAIN.</b>					
24	J. L. Motley, late minister.....	7,826 09	1,323 58		
25	R. C. Schenck, minister.....				
26	H. Moran, secretary of legation.....	4,556 68	2,944 11		
27	M. Woodhull, assistant secretary.....				
		12,382 77	4,267 69		16,650 46
<b>GREECE.</b>					
28	C. K. Tuckerman, late minister.....	7,500 00	260 42	6 46	7,766 88
<b>GUATEMALA.</b>					
29	S. A. Hudson, minister.....	11,250 00	683 90	94 52	12,028 42
<b>HAWAIIAN ISLANDS.</b>					
30	H. A. Peabody, minister.....	7,500 00	101 64		7,601 64
<b>HAYTI.</b>					
31	E. D. Bassett, minister.....				
<b>HONDURAS.</b>					
32	Henry Baxter, minister.....				
<b>ITALY.</b>					
33	George P. Marsh, minister.....	12,000 00	461 48	41 44	
34	G. W. Wurtz, secretary of legation.....	1,800 00			
		13,800 00	461 48	41 44	14,302 92
<b>JAPAN.</b>					
35	C. E. DeLong, minister.....	7,404 88	638 45	476 36	
36	J. L. C. Postman, second interpreter.....				
37	J. C. Hepburn, interpreter.....				
		7,404 88	638 45	476 36	8,519 69
<b>LIBERIA.</b>					
38	J. M. Turner, minister.....	968 68			968 68

## A.—Statement of the expenses of all missions abroad, &amp;c.—Continued.

No.	Mission.	Salary.	Contingen- cies.	Loss by exchange.	Total.
MEXICO.					
39	Thomas H. Nelson, minister.....	\$12,000 00	\$1,887 56		\$13,887 56
40	P. C. Bliss, secretary of legation.....				
		12,000 00	1,887 56		
NETHERLANDS.					
41	Hugh Ewing, late minister.....	3,742 18	122 80		11,072 91
42	C. T. Gorham, minister.....	6,888 58	313 96	\$5 39	
		10,630 76	435 76	5 39	
NICARAGUA.					
43	C. N. Riotta, minister.....	7,500 00	491 96		7,991 96
PARAGUAY AND URUGUAY.					
44	J. L. Stevens, minister.....	11,714 48	266 43	491 42	12,472 33
PERU.					
45	A. P. Hovey, late minister.....	2,500 00	102 12	93 01	7,474 37
46	Thomas Settle, minister.....	3,085 00	194 24		
47	H. M. Brent, secretary of legation.....	1,500 00			
		7,085 00	296 36	93 01	
PORTUGAL.					
48	C. H. Lewis, minister.....	7,500 00	337 26	19 59	7,856 85
RUSSIA.					
49	A. G. Curtin, minister.....	12,000 00	972 59		14,772 59
50	E. Schuyler, secretary of legation.....	1,800 00			
		13,800 00	972 59		
SALVADOR.					
51	A. T. A. Torbert, minister.....	7,500 00	93 00		7,593 00
SPAIN.					
52	D. E. Sickles, minister.....	12,000 00	6,543 62	911 83	21,255 45
53	A. A. Ades, secretary of legation.....	1,800 00			
		13,800 00	6,543 62	911 83	
SWEDEN.					
54	C. C. Andrews, minister.....	7,500 00	368 09	319 66	8,207 75
SWITZERLAND.					
55	H. Rublee, minister.....	7,500 00	390 37	94 31	7,984 68
TURKEY.					
56	E. Joy Morris, ———.....	2,384 51	933 83	45 35	16,279 46
57	W. Mac Veagh, late minister.....	8,056 32	1,773 69	85 76	
58	G. P. Brown, secretary of legation.....	3,000 00			
		13,440 83	2,707 52	131 11	
VENEZUELA.					
59	J. R. Partridge, late minister.....	1,806 65			1,806 65
60	W. A. Pile, minister.....				
		1,806 65			
ALEXANDRIA.					
61	G. H. Butler, consul general.....		1,244 84		1,244 84
TANGIER.					
62	F. A. Mathews, consul.....		800 00		800 00
TUNIS.					
63	George H. Heap, consul.....		624 30		624 30
TRIPOLI.					
64	M. Vidal, consul.....		746 79		746 79
UNITED STATES BANKERS, LONDON.					
		304,729 04	34,722 86	5,696 82	345,148 72
65	Baring Bro's & Co.....				437,109 83
	Grand total.....				782,256 55

## REMARKS.

1. Final account of late minister.  
 2. Salary while acting as chargé.  
 3. Inclusive of transit to post.  
 4. Salary while acting minister.  
 5. Accounts incomplete.  
 6. Salary while in charge of mission.  
 7. Final account of late minister.

16. Salary for transit to post and instructions included.  
 25. No accounts received.  
 31. No accounts received.  
 32. No accounts received.  
 56. Final account of minister.  
 59. No accounts received.

B.—Statement of consular salaries, fees, and loss by exchange for the fiscal year ending June 30, 1871.

No.	Consulate.	Salaries.	Fees.	Loss by exchange.
<b>A.</b>				
1	Amoor River	\$2,033 40	\$57 71	\$126 22
2	Algiers	1,667 10		89 42
3	Antwerp	2,767 85	3,748 43	
4	Amsterdam	1,000 00	1,219 16	
5	Aix-la-Chapelle	5,125 00	5,223 50	
6	Alexandria	3,500 00	67 97	12 36
7	Amoy	3,000 00	1,033 67	377 90
8	Apia	1,000 00	81 06	275 67
9	Aux Cayes	541 67	290 61	
10	Acapulco	2,000 00	563 85	
11	Aspinwall	2,500 00	2,533 74	
<b>B.</b>				
12	Belfast	2,000 00	11,995 38	
13	Bay of Islands	1,018 29	195 44	20 57
14	Bordeaux	2,788 04	8,689 85	7 00
15	Barcelona	1,541 46	218 42	79 38
16	Batavia	552 42	430 11	6 09
17	Bremen	3,000 00	3,076 50	
18	Breke	4,000 00	6,264 00	36 09
19	Buenos Ayres	2,461 95	209 79	109 12
20	Bahia	1,000 00	1,022 59	
21	Buenos Ayres	6,808 09	4,000 40	
22	Bangkok	3,000 00	238 94	897 28
23	Brindisi	1,924 42	8 27	
24	Boulogne	1,500 00	371 53	56 81
25	Bradford	4,412 13	16,706 00	
26	Berlin	3,512 83	7,529 00	
27	Barmen	4,000 00	12,002 75	29 13
28	Birmingham	4,000 00	17,729 50	
29	Brussels	3,332 30	6,141 50	
<b>C.</b>				
30	Cork	2,304 68	1,312 10	9 09
31	Calcutta	5,819 69	7,113 70	
32	Cape Town	1,000 00	403 94	50 41
33	Cadix	1,683 42	425 95	27 20
34	Constantinople	3,000 00	522 30	109 78
35	Canea	1,000 00		100 00
36	Cyprus	1,000 00		48 75
37	Canton	5,315 02	1,798 85	562 94
38	Cape Haytien	1,872 28	1,017 20	
39	Cheamnitz	2,000 00	9,311 51	
40	Carthagena	500 00	363 41	
41	Callao	3,804 35	2,619 24	
42	Coticoek	2,000 00	5,576 25	
43	Chin-Kiang	3,000 00	1,248 29	277 63
44	Clifton	2,201 61	3,742 25	
45	Ceylon	1,000 00	350 02	
<b>D.</b>				
46	Dunee	2,000 00	7,067 33	3 18
47	Demerara	2,000 00	2,298 78	
48	Dresden	4,404 47	5,619 00	
<b>E.</b>				
49	Elainore	1,754 39	341 95	52 46
<b>F.</b>				
50	Fort Erie	3,053 50	4,815 75	
51	Funchal	1,624 09	97 83	
52	Faval	750 00	510 13	
53	Fochow	3,500 00	950 67	374 90
54	Frankfort-on-the-Main	4,250 00	2,709 25	20 84
<b>G.</b>				
55	Greece	1,500 00	1,531 19	
56	Glasgow	3,299 00	11,752 39	

## B.—Statement of consular salaries, fees, &amp;c.—Continued.

No.	Consulates.	Salaries.	Fees.	Loss by exchange.
57	Geneva.....	\$1,500 00	\$1,505 75	\$5 02
58	Guayaquil.....	750 00	204 88	78 84
59	Gibraltar.....	1,500 00	846 88	.....
60	Gaboon.....	1,551 91	97 47	.....
61	Guayamas.....	1,000 00	873 95	.....
62	Goderich.....	3,846 84	3,123 60	.....
II.				
63	Havana.....	7,000 00	20,007 98	.....
64	Hong-Kong.....	5,581 39	8,028 75	.....
65	Halifax.....	2,000 00	3,102 22	16 57
66	Hamburg.....	2,000 00	5,516 40	6 25
67	Hakodadi.....	3,213 49	273 14	243 42
68	Honolulu.....	5,300 25	6,390 77	.....
69	Havre.....	6,000 00	3,475 14	85 27
70	Hankow.....	3,839 67	1,094 35	224 68
71	Hamilton.....	2,806 89	3,967 00	.....
J.				
72	Jerusalem.....	1,500 00	97 50	102 09
K.				
73	Kingston, Jamaica.....	2,790 64	1,723 70	32 84
74	Kingston, Canada.....	1,500 00	2,143 98	.....
75	Kanagawa.....	3,000 00	5,944 22	.....
L.				
76	Liverpool.....	10,540 94	41,218 43	.....
77	London.....	8,056 33	51,240 73	.....
78	Leeds.....	2,000 00	2,279 75	.....
79	Lisbon.....	183 43	.....	.....
80	La Rochelle.....	1,500 00	624 50	13 13
81	Leipsic.....	2,212 50	7,216 50	.....
82	Laguayra.....	1,500 00	536 61	.....
83	Lahaina.....	1,697 79	.....	.....
84	Leith.....	3,872 84	5,357 55	.....
85	Lyons.....	4,000 00	11,064 25	72 60
86	Leghorn.....	1,500 00	1,864 48	.....
87	Lanthala.....	4,144 02	392 48	.....
M.				
88	Mayence.....	.....	.....	.....
89	Manchester.....	3,000 00	28,503 50	.....
90	Malta.....	1,500 00	297 17	39 33
91	Marseilles.....	2,500 00	3,556 24	.....
92	Malaga.....	1,549 63	1,756 57	32 74
93	Matanzas.....	5,500 00	10,170 02	.....
94	Munich.....	1,500 00	1,118 56	50 35
95	Messina.....	1,000 98	2,639 23	.....
96	Mexico.....	1,000 00	691 25	.....
97	Montevideo.....	1,178 90	2,253 01	.....
98	Maranham.....	1,000 00	229 22	.....
99	Mauritius.....	2,500 00	260 09	111 68
100	Montreal.....	14,373 30	18,700 99	.....
101	Melbourne.....	5,766 70	2,088 57	59 79
102	Matamoros.....	2,000 00	2,981 63	.....
N.				
103	Nassau, N. P.....	2,000 00	1,636 78	3 92
104	Newcastle-upon-Tyne.....	2,569 91	2,596 91	1 22
105	Nantes.....	1,616 49	467 49	30 57
106	Nice.....	1,891 85	415 50	57 59
107	Nagasaki.....	3,000 00	674 33	354 07
108	Naples.....	1,125 00	938 42	19 83
109	Nuremberg.....	2,500 00	6,317 50	.....
O.				
110	Odessa.....	2,000 00	151 00	275 64
111	Opoto.....	750 00	140 46	47 73
112	Osaka and Miogo.....	3,000 00	2,038 77	108 34
113	Omoa and Truxillo.....	1,000 00	39 60	.....
P.				
114	Port Stanley.....	1,813 89	158 11	.....
115	Port Mahon.....	1,500 00	29 33	22 80
116	Paso del Norte.....	273 20	18 00	.....
117	Panama.....	3,500 00	1,888 11	.....
118	Pernambuco.....	2,629 03	1,187 87	113 03
119	Para.....	1,000 00	2,306 22	.....
120	Payta.....	543 06	365 00	.....
121	Pictou.....	3,429 64	2,333 29	2 45
122	Palermo.....	1,500 00	1,637 97	.....
123	Piræus.....	1,000 00	7 50	97 98
124	Proconsul.....	5,513 20	5,176 75	28
125	Paris.....	7,467 39	20,776 00	171 37

## B.—Statement of consular salaries, fees, &amp;c.—Continued.

No.	Consulate.	Salaries.	Fees.	Loss by exchange.
136	Prince Edward Island .....	\$1,004 63	\$298 52	\$17 08
137	Port Said .....	1,614 13	29 80	88 22
	Q.			
138	Quebec .....	1,734 17	913 00	5 62
	R.			
139	Rotterdam .....	2,000 00	2,216 30	16 52
140	Rio de Janeiro .....	4,347 35	5,604 99	91 04
141	Rio Grande .....	750 00	483 63	.....
142	Rome .....	2,040 04	1,785 25	32 08
	S.			
143	St. John's, N. B. ....	4,742 75	8,441 24	3 23
144	St. Petersburg .....	2,000 00	768 00	160 68
145	St. Paul de Leonido .....	750 00	47 91	.....
146	St. Thomas .....	4,347 82	1,962 17	29 80
147	St. Domingo .....	2,007 41	384 93	40 63
148	St. Catharine's .....	1,500 00	104 73	.....
149	Sonneberg .....	4,178 34	5,558 50	.....
150	Singapore .....	3,540 45	1,197 84	83 51
151	Santiago de Cuba .....	2,921 19	649 16	60 33
152	San Juan, P. R. ....	10,042 62	9,022 69	.....
153	Santiago, C. V. ....	819 50	41 71	78 43
154	Santa Cruz .....	2,063 00	646 75	.....
155	Stuttgart .....	2,000 00	3,018 25	7 26
156	Spencia .....	1,500 00	10 00	98 11
157	Swyran .....	2,000 00	1,533 78	71 01
158	Swatow .....	3,500 00	975 46	321 01
159	San Juan del Norte .....	2,000 00	363 21	.....
160	San Juan del Sur .....	2,000 00	422 12	.....
161	Sabanilla .....	.....	.....	.....
162	Seottia .....	1,143 53	222 52	46 35
163	Southampton .....	1,000 00	172 00	.....
164	St. Helena .....	1,500 00	679 06	2 98
165	St. John's, Canada .....	.....	.....	.....
166	Sarala .....	1,500 00	1,452 50	.....
167	Sheffield .....	7,429 68	21,293 56	.....
168	Seychelles .....	1,467 03	58 78	20 71
169	Shanghai .....	6,000 00	7,412 40	.....
	T.			
170	Taharo .....	1,415 76	906 18	.....
171	Tangier .....	3,456 50	6 00	100 57
172	Trieste .....	2,000 00	1,665 93	.....
173	Tampico .....	1,813 86	297 95	.....
174	Trinidad de Cuba .....	4,500 00	2,742 35	.....
175	Tripoli .....	.....	.....	.....
176	Tunis .....	3,000 00	9 50	.....
177	Tumbes .....	267 66	190 70	.....
178	Tahiti .....	500 00	346 89	.....
179	Takabmano .....	1,081 52	822 61	.....
180	Toronto .....	5,479 50	7,112 00	.....
181	Tumatave .....	2,000 00	41 42	371 46
182	Tunstall .....	3,500 00	14,065 00	.....
183	Turk's Island .....	2,579 04	608 66	.....
	V.			
184	Venice .....	750 00	470 06	31 44
185	Valparaiso .....	3,000 00	2,141 60	.....
186	Vicenza .....	2,314 95	5,873 25	39 91
187	Valencia .....	375 00	113 46	9 38
188	Vera Cruz .....	3,500 00	2,228 04	.....
	W.			
189	Windsor .....	1,500 00	2,035 25	.....
190	Winnipeg .....	1,691 58	934 75	.....
	Y.			
191	Yokko .....	2,380 10	177 35	310 16
	Z.			
192	Zarich .....	4,092 90	7,448 75	.....
193	Zanzibar .....	1,000 00	253 62	86 60
194	Agents to examine consular affairs .....	10,527 22	.....	97 02

Total fees received .....	\$632,256 22
salaries paid .....	\$475,861 95
loss by exchange .....	8,776 00

Excess of fees over salaries and loss by exchange .....

## REMARKS.

1. From April 1, 1870, to September 30, 1870, and inclusive of salary for transit.
2. Inclusive of salary for transit.
3. Inclusive of salary for transit.
5. Inclusive of consular agency.
6. From January 1, 1870, to December 31, 1870.
14. Inclusive of salary from April 1, 1869, to July 13, 1869, and for transit.
16. Returns incomplete.
18. Inclusive of consular agency.
19. Inclusive of salary of consular clerk.
21. Inclusive of allowance to H. R. Helper, per act of July 7, 1870.
23. Inclusive of salary for instruction period and transit.
25. Inclusive of expenses.
26. Inclusive of expenses.
27. Inclusive of consular agency.
28. Inclusive of consular agencies.
29. Inclusive of expenses.
30. Inclusive of salary for instruction period and transit.
31. Inclusive of salary for instruction periods.
33. Inclusive of salary for transit.
37. Inclusive of salary for instruction period and transit.
38. Inclusive of salary for instruction period and transit, and from September 1, 1869.
41. Inclusive of salary for transit.
44. Inclusive of consular agency.
48. Inclusive of expenses.
49. Inclusive of consular agencies.
50. Inclusive of consular agencies.
51. Inclusive of salary for instruction period.
54. Inclusive of salary of consular clerk and for transit.
56. Inclusive of salary, while awaiting exequatur.
60. Inclusive of part of previous year. Returns incomplete.
62. Inclusive of consular agencies, and salary for instructions and transit.
63. Inclusive of salary of consular clerk.
64. Inclusive of salary for instruction period and transit.
67. Inclusive of salary for instruction period and transit.
68. Inclusive of salary for instruction period and transit.
70. Inclusive of part of last fiscal year.
71. Inclusive of expenses.
73. Inclusive of salary for instruction period and transit.
76. Inclusive of consular agency and salary of consular clerk.
77. Inclusive of salary for instructions, transit, and awaiting exequatur.
79. Returns incomplete.
81. Inclusive of salary for transit, awaiting exequatur, and of consular clerk.
83. No salary settled since January 24, 1871.
84. Inclusive of expenses.
85. Inclusive of consular agency.
87. Inclusive of reports for 1870, part of 1869 and 1868.
88. Returns incomplete.
93. Inclusive of consular agencies.
100. Inclusive of consular agencies for 1869, 1870, and 1871.
101. Inclusive of salary for instruction period, transits, and awaiting recognition.
104. Inclusive of consular agencies.
106. Inclusive of salary for instruction period and transit.
109. Expenses for clerk-hire and office-rent; suspended by Department of State.
111. Settled to December 31, 1870.
114. Inclusive of returns from January 1, 1870, and salary for transit.
116. Settled to January 16, 1871.
118. Inclusive of salary for transits and instruction period.
121. Inclusive of consular agencies.
124. Inclusive of consular agencies.
125. Inclusive of consular clerks' salaries.
126. Inclusive of first and second quarters of 1870, and salary for instruction period.
128. Inclusive of salary for instruction period and transits.
131. Accounts for second quarter of 1871 not received.
132. Inclusive of part of 1869, and salary for transit.
133. Inclusive of expenses, and consular agencies.
135. Accounts for second quarter 1871 not received.
136. Inclusive of salary for transit, and awaiting exequatur.
137. Inclusive of salary for instruction period, transit, and awaiting exequatur.
139. Inclusive of expenses.
140. Inclusive of salary for transit.
141. Inclusive of salary for instruction period and transit.
142. Inclusive of consular agencies from July 1, 1869.
143. Inclusive of salary for instruction period.
144. Inclusive of salary for instruction period and consular agency.
151. No returns.
152. Inclusive of salary for transit.
153. Accounts settled to December 31, 1870.
155. Returns included in report from Montreal.
157. Inclusive of expenses and consular agencies.
159. Inclusive of salary of consular clerks.
160. Inclusive of returns since December 2, 1868.
161. Inclusive of salary for transit.
163. Inclusive of salary for transit.
164. Inclusive of consular agencies.
165. Suspended by direction of Department of State.
167. Accounts for first and second quarters 1871 not received.
168. Accounts for first and second quarters 1871 not received.



170. Inclusive of consular agencies.  
 172. Inclusive of returns from October 1, 1869.  
 173. Inclusive of consular agencies.  
 175. Inclusive of salary of consular clerk.  
 177. Accounts suspended October 1, 1870.  
 181. Accounts adjusted to April 17, 1871.  
 182. Inclusive of consular agency.  
 184. Inclusive of expenses. One account suspended.

**B 1.—Expenditures on account of sundry appropriations from July 1, 1870, to June 30, 1871, as shown by adjustments made in this office.**

For interpreters to the consulates in China, Japan, and Siam .....	\$6,896 37
For salaries of the marshals of the consular courts in Japan, including that at Nagasaki, and in China, Siam, and Turkey .....	7,917 31
For rent of prisons for American convicts in Japan, China, Siam, and Turkey .....	13,030 14
For expenses of the consulates in the Turkish dominions, namely: Interpreters, guards, and other expenses of the consulates at Constantinople, Smyrna, Candia, Alexandria, Jerusalem, and Beirut .....	2,094 41
For expenses of cemetery at Acapulco, Mexico, and loss by exchange thereon .....	1,030 00

**C.—Statement showing the amount expended by the consular officers of the United States for the relief of American seamen, the money received by said officers for extra wages, &c., and the loss by exchange incurred by them in drawing for balances due them, during the fiscal year ending June 30<sup>th</sup> 1870.**

Consulate.	Expended.	Received.	Loss by exchange.
Acapulco .....	\$712 68	\$42 04	
Alexandria .....	101 16		\$7 07
Algiers .....	3 45		
Amoy .....	92 75	88 90	
Amsterdam .....	216 28	87 12	
Ancona .....	3 47		29
Antigua .....	55 62	36 00	
Antwerp .....	8 00	74 99	
Aspenwall .....	925 65		
Ats Cayen .....	6 00		
Bahia .....		74 00	
Bangkok .....	62 80	95 00	23 15
Barbadoes .....	602 24	375 42	
Batavia .....	75 17		5 53
Bombay .....	1,493 28	485 64	88 64
Bay of Islands, New Zealand .....	1,000 41	812 00	12 72
Bermuda .....	40 32	44 00	
Bombay .....	22 02	26 70	
Bombay .....	47 46	31 57	84
Bradford .....	11 64		
British .....	37 07	48 29	
Burmas Ayres .....		25 00	
Cadix .....	656 10	264 10	37 05
Calcutta .....		1,653 53	
Canton .....	3,864 12	2,408 50	
Canton .....	6 00	25 59	
Cape Town .....	1,005 65	202 34	30 29
Canton .....	202 50	244 30	
India, Canada .....	6 75		
Constantinople .....	112 99		11 30
Cebu .....	102 25	105 00	
Coracao .....		769 50	
Demerara .....		48 36	
Dundee .....	12 30		
Edinburgh .....		16 08	
Falkland Islands .....	1,049 89		
Falmouth .....	376 13	17 96	10 01
Foul .....	2,446 20	602 09	
Fort Erie, Canada .....	147 63		
Frankfurt .....	5 76		
Frankfurt .....	573 44	516 95	
Grenada .....	146 17	139 00	
Gibraltar .....	163 13	247 96	
Guangow .....	35 97		
Guaymas .....	1,022 46	34 95	25 75
Hankow .....	1,520 53		
Hankow .....	26 00	115 00	
Havana .....	450 70	1,065 80	
Havre .....	226 34	194 97	7 90
Hong Kong .....		100 00	
Hong Kong .....	1,611 00	681 00	
Hong Kong .....	3,573 25	4,198 81	

C.—Statement showing the amount expended by the consular officers, &amp;c.—Continued.

Consulate.	Expended.	Received.	Loss by exchange.
Kanagawa.....	\$86 00	\$36 00	
Kingston, Jamaica.....	239 04	4 86	\$10 14
La Paz, Mexico.....	1,227 00		
Leghorn.....		20 00	
Leith.....	4 60		
Liverpool.....	2,116 03	3,973 55	
London.....	325 29	30 00	
Malaga.....	2,919 21	135 00	204 94
Malta.....		36 36	
Manchester.....	21 06		
Manilla.....	529 26	113 60	14 41
Mansanillo.....	119 25		
Maranham.....	139 75		
Marselles.....	804 30	153 00	
Matanzas.....	170 62	405 32	
Mauritius.....	1,544 04	92 25	65 97
Melbourne.....	374 45	350 68	
Messina.....	50 00	20 60	
Minatitlan.....	57 50		
Montevideo.....	399 78	176 88	
Nantes.....		37 50	
Naples.....	13 52		
Nassau, Bahamas.....	1,701 26		12 97
Newcastle-upon-Tyne.....	48 41		1 66
Nice.....	34 20		1 49
Panama.....	486 50	805 00	
Para.....	24 10	12 50	
Paramaribo.....	133 98		
Paris.....	52 21		
Payta.....	4,229 89	440 00	23 71
Pernambuco.....	993 00	542 85	61 49
Piræus, Greece.....	8 36		1 00
Puerto Cabello.....		320 18	
Quebec.....	14 00		
Riga, Russia.....	253 21		
Rio de Janeiro.....	630 18	212 99	
Rio Grande do Sul.....	1,545 05		
Rotterdam.....	66 84	115 10	
San Andres.....	12 65	110 00	
Santiago, Verde Islands.....	226 67	84 00	12 61
Seychelles.....	103 00	166 40	
Shanghai.....	655 20	414 67	
Sheffield.....	17 42		
Sierra Leone.....	65 00		
Singapore.....	605 46	1,050 64	
Smyrna.....	129 25		19 41
Southampton.....	68 04		
Saint Catharine, Brazil.....	13 13	20 00	
Saint Helena.....	291 48	598 47	
Saint John, New Brunswick.....	10 40		
Saint Thomas, West Indies.....	1,430 39		
Stockholm.....	19 81		
Swatow, China.....		10 55	
Sydney, Australia.....	131 42	23 75	
Tabasco.....	91 00		
Tabiti.....	1,815 09	306 00	122 71
Talcahuano.....	5,229 72	1,439 00	
Tampico.....	10 00		
Teneriffe.....		17 00	
Trieste.....	107 41	178 11	
Trinidad de Cuba.....	58 00	53 42	
Tumbes.....	204 25	100 00	
Turks' Islands.....	75 24		
Valencia.....	36 30	215 46	
Valparaiso.....	1,483 57	491 83	
Vera Cruz.....	19 50		
Victoria, Vancouver's Island.....	229 00	66 25	
Zanzibar.....	249 85	300 59	45 26
	61,429 29	30,729 58	883 31

## RECAPITULATION.

Total amount of expenditures and loss by exchange.....	\$62,312 60
Amount of extra wages received.....	30,729 58
Excess of disbursements over receipts.....	31,583 02

*Statement showing the amount refunded citizens, seamen, or their representatives, directly from the United States Treasury, the several sums having been previously paid therein by consular officers, during the fiscal year ending June 30, 1871.*

William Edward MacArille, seaman, estate of.....	\$25 22
A. D. Bache, paymaster United States Navy.....	99 28
Solomon Freeman, seaman, estate of.....	5 32
George W. Freeman, seaman, estate of.....	66 67
Edwin Morey, managing owner schooner "Maria Hall".....	100 03
John Furey, paymaster United States Navy.....	859 83
Francis Daugherty, seaman, estate of.....	91 80
George W. Beaman, paymaster United States Navy.....	117 63
William H. Smyley, late commercial agent, deceased.....	1,132 46
L. W. Bradley, seaman, estate of.....	97 92
Robert W. Allen, paymaster United States Navy.....	12 27
Philip E. O'Reilly, citizen, estate of.....	316 37
James B. Blood, seaman, estate of.....	23 25
J. M. Schnaufer, seaman, estate of.....	77 59
Ferdinand Blancke, owner of ship "William Frothingham".....	225 54
Henry M. Meade, paymaster United States Navy.....	37 96
Thomas Edwards, seaman, estate of.....	112 00
Charles Wheeler, seaman, estate of.....	32 00
A. G. Greeley, paymaster United States Navy.....	28 54
Mansel (alias Frank) Sylvia, seaman, estate of.....	179 18
<b>Total.....</b>	<b>3,640 86</b>

*Department accounts received and settled for the fiscal year ending June 30, 1871.*

**State Department:**

Expenses of Universal Exposition at Paris.....	\$4,506 12
Publishing laws in pamphlet form.....	89,772 18
Proof-reading and packing.....	2,903 79
Extra clerk-hire.....	12,816 65
Copper-plate printing, books, maps, &c.....	3,852 70
Rescue of American citizens from shipwreck.....	4,534 25
Expenses under the neutrality act.....	5,779 22
Stationery, furniture, &c.....	5,000 00
Salary and expenses of British and American Joint Commission.....	14,007 22
Awards under convention between the United States and Peru.....	54,188 00
Hudson Bay and Puget Sound indemnity.....	325,000 00
Contingent expenses of foreign intercourse and missions abroad.....	\$54,877 62
The same, approved by Department of State.....	20,556 44
	75,434 06
Blank books, office-rent, &c., of consuls.....	41,884 66
The same, approved by Department of State.....	72,340 45
	114,225 11
	<b>716,019 30</b>

**Interior Department:**

Expenses of taking Ninth Census.....	\$364 992 56
Expenses of taking Eighth Census.....	33,394 73
Taking census in Colorado.....	60 00
Miscellaneous and other expenses of Patent Office.....	117,405 16
Printing, photographing, &c., of Patent Office.....	34,803 28
Packing and distributing documents.....	7,088 24
Suppression of the slave-trade.....	1,529 97
	<b>1,059,323 04</b>

**Post-Office Department:**

Blank books, &c.....	\$58,523 60
Miscellaneous expenses.....	3,739 75
Ventilation of Post-Office Department building.....	10,000 34
	<b>72,263 69</b>

\* Miscellaneous expenses were incurred before July 1, 1870.

Statement showing the expenses of assessing the internal revenue taxes in the several collection districts, including the salaries, commissions, and allowances of the assessors, their contingent expenses, and the compensation of assistant assessors and store-keepers, from July 1, 1870, to June 30, 1871.

District.	Gross compen-	Tax.	Net compen-	Clerk hire.	Stationery.	Printing and ad-	Postage and ex-	Rent of assess-	Survey of dis-	Net compen-	Net compen-	Tax on compen-	Total.
<b>ALABAMA.</b>													
First district.	\$4,752 43	\$95 48	\$4,656 95	\$2,700 00	\$130 64	\$7 50	\$50 25	\$278 00		\$12,814 71		\$39 84	\$20,360 05
Second district.	2,486 26	6 32	2,479 94	3,324 88	191 18	48 00	170 47	150 00		13,337 64		54 37	19,483 77
Third district.	3,975 80	64 78	3,911 02	1,825 00	83 13	9 00			\$27 80	8,508 52		127 56	15,067 53
Total.	11,214 49	166 58	11,047 91	6,849 88	414 95	64 50	220 72	398 00	27 80	34,720 87	1,186 43	251 77	54,931 05
<b>ARIZONA.</b>													
Arizona.	2,500 00	6 32	2,493 68		32 50	27 00	15 99	300 00		2,109 01	375 53	7 97	5,353 71
<b>ARKANSAS.</b>													
First district.	2,500 00	6 32	2,493 68	649 97	109 47	149 74	165 30	260 00		9,195 99	384 92	36 74	13,409 97
Second district.	1,639 32	10 30	1,629 02	1,650 00	61 54	10 50	42 93	450 00		6,923 74		25 70	10,866 03
Third district.	2,706 04	12 50	2,693 54	558 33	23 49	3 50	49 50	150 00		6,039 86		26 82	9,527 52
Total.	6,905 36	29 12	6,876 24	2,858 30	203 50	172 74	257 62	860 00		22,159 59	384 92	99 26	33,893 91
<b>CALIFORNIA.</b>													
First district, (old)††.	4,942 24	66 48	4,875 76	4,212 00	214 46		26 79	1,770 74		63,350 28	3,938 39	1,678 48	78,388 42
First district, (new).	1,000 00		1,000 00	1,249 94	35 00	17 77	48 72	50 00		8,571 78	1,210 00		12,633 21
Second district.	2,160 18	29 81	2,130 37	1,499 94	93 21	127 61	117 83	190 17		7,684 95	645 00	50 16	12,511 83
Third district.	2,750 60	70 65	2,740 01	1,500 00	135 20	116 55	25 99	360 00	155 00	7,656 57	1,025 00		13,714 32
Fourth district.	2,897 49	54 01	2,843 48	2,376 84	144 46	38 00	163 00	500 00		13,608 68		22 39	19,644 46
Fifth district.	2,690 32	15 83	2,674 49	1,500 00	45 00	36 00	17 99	300 00	143 40	7,851 84		53 81	12,568 72
Total.	16,410 89	176 78	16,234 11	12,338 72	667 33	335 93	400 33	3,650 91	321 15	102,724 10	6,818 39	1,830 87	149,400 96
<b>COLORADO.</b>													
Colorado.	2,500 00	6 32	2,493 68	1,452 50	58 85	129 35	66 50	460 00		4,335 59		15 73	9,018 47

First district	2,710 26	17 08	3,004 14	600 08	64 08	19 50	111 07	990 08	36 99	8,441 08	4,003 84	81 18	18,777 48
Second district	2,732 11	9 54	3,008 47	1,000 00	44 75	7 50	138 08	100 00	81 45	9,017 08	.....	14 04	12,407 88
Third district	1,847 00	8 08	1,839 47	830 00	41 45	14 50	60 78	300 00	9 90	4,067 04	.....	15 50	7,087 00
Fourth district	2,380 00	6 08	2,374 41	830 00	38 55	8 25	75 54	75 00	34 00	9,365 14	.....	.....	18,008 01
Total	14,769 00	60 13	16,131 49	4,000 00	180 77	49 75	263 59	755 00	137 08	31,078 38	4,003 84	60 08	64,067 38
DAKOTA.													
Dakota*	2,300 07	61 40	2,518 97	.....	84 03	6 00	46 01	810 00	.....	1,035 10	.....	18 54	4,000 07
DELAWARE.													
Delaware	3,041 01	16 01	3,044 70	1,375 00	98 08	.....	77 50	.....	137 00	10,404 09	.....	28 47	15,188 07
DISTRICT COLUMBIA.													
District Columbia	2,345 38	8 16	2,337 16	1,765 00	72 06	40 08	10 00	490 00	.....	8,561 50	.....	17 47	12,196 00
FLORIDA.													
Florida	2,705 80	12 50	2,693 40	1,425 00	170 43	106 50	106 92	875 00	.....	10,508 03	.....	37 38	15,374 30
GEORGIA.													
First district	2,475 84	6 23	2,469 56	1,050 00	206 06	6 50	55 00	480 00	.....	12,367 03	.....	30 87	17,304 60
Second district	2,653 67	21 04	2,661 99	1,050 00	44 57	11 50	118 38	150 00	60 50	11,458 00	.....	50 05	16,855 85
Third district	2,786 72	10 13	2,716 50	1,020 00	108 83	23 85	168 41	332 50	.....	19,317 04	.....	167 36	24,700 19
Fourth district	2,000 00	8 52	2,191 78	1,000 00	105 69	7 50	77 93	350 00	.....	13,315 07	.....	33 56	19,118 50
Total	10,858 97	46 35	10,469 92	7,350 00	563 38	48 75	413 01	1,301 50	00 50	56,778 74	571 00	530 87	77,948 80
IDAHO.													
Idaho	2,516 36	7 13	2,509 23	248 00	16 00	69 50	17 00	600 00	.....	5,117 91	1,532 93	41 74	10,110 57
ILLINOIS.													
First district	15,005 26	210 21	14,785 05	4,313 00	373 17	3 25	137 04	1,000 00	.....	57,998 19	24,314 56	144 96	68,192 06
Second district	3,379 43	63 41	3,376 07	855 00	180 53	25 15	94 36	170 00	.....	8,074 03	825 72	14 75	11,050 78
Third district	4,947 43	72 17	4,915 25	1,300 00	43 86	90 00	129 87	140 00	.....	8,570 45	4,308 47	18 50	19,404 00
Fourth district	6,376 09	99 04	6,377 01	1,349 94	87 44	80 00	108 25	150 00	10 15	7,077 75	4,357 40	84 06	19,353 78
Fifth district	10,949 38	146 37	10,063 11	1,568 00	187 41	99 43	501 62	62 85	.....	13,522 61	10,460 04	48 84	36,315 64
Sixth district	3,051 95	53 34	3,044 61	600 00	46 06	14 50	31 34	900 00	3 50	6,471 50	1,463 78	18 71	12,740 06
Seventh district	5,557 07	75 53	5,481 54	1,900 00	97 28	17 25	78 18	125 00	.....	9,549 25	4,431 64	31 01	20,680 94
Eighth district	124 14	15 91	5,013 67	1,599 99	75 40	40 10	94 46	100 00	.....	12,071 81	7,945 34	47 02	27,049 17
Ninth district	8,490 25	51 91	8,444 44	855 00	11 05	.....	52 50	100 00	92 30	4,105 64	1,135 10	13 40	7,196 07

# PAPERS ACCOMPANYING THE

District	Gross compen- sation.	Tax.	Net compen- sation.	Clerk hire.	Stationery.	Printing and ad- vertising.	Postage and ex- press.	Rent of accom- modations.	Survey of dis- tricts.	Net compen- sation of assist- ants and messengers.	Net compen- sation of store- keepers.	Tax on compen- sation of assist- ants and store-keepers.	Total.
<b>ILLINOIS—Cont'd.</b>													
Tenth district	\$1,729 50	\$12 49	\$1,709 17	\$213 00	\$48 61	\$19 65	\$23 70	\$250 00	.....	\$6,469 00	.....	\$14 38	\$8,898 28
Eleventh district	1,500 00	9 11	1,497 89	925 00	44 95	11 90	57 08	177 00	\$59 30	5,179 44	\$276 00	9 70	7,714 56
Twelfth district	4,510 70	54 03	4,456 76	1,048 41	85 80	96 00	58 74	167 58	22 15	6,539 40	2,961 80	17 31	13,537 53
Thirteenth district	1,568 60	5 54	1,563 06	1,449 94	50 06	49 00	15 21	72 00	21 50	6,492 13	.....	16 47	5,712 70
Total	67,302 23	1,011 60	66,290 63	15,477 98	1,920 81	364 43	1,114 14	2,554 43	137 70	115,095 12	60,810 63	407 54	303,065 17
<b>INDIANA.</b>													
First district	\$4,902 51	\$64 87	\$4,837 64	\$1,983 33	\$97 85	\$58 30	\$57 80	\$160 00	\$150 40	\$7,489 62	\$5,160 88	\$18 30	\$19,938 23
Second district	1,892 33	11 07	1,881 26	1,140 96	73 44	27 75	10 70	101 67	129 41	5,706 43	1,134 06	11 41	17,923 19
Third district	4,734 54	59 23	4,675 31	1,800 00	64 73	26 50	41 64	173 00	.....	4,977 67	2,677 62	13 90	13,624 96
Fourth district	9,047 11	110 21	8,936 90	1,000 00	8 00	12 50	30 67	130 00	30 10	4,500 63	2,321 07	13 43	22,553 00
Fifth district	3,042 50	39 03	2,983 47	1,749 89	72 13	17 40	37 23	182 00	.....	5,377 94	1,951 40	13 62	10,510 62
Sixth district	3,668 14	37 52	3,630 62	1,000 00	131 65	45 50	48 50	75 00	10 35	6,886 79	3,373 60	15 69	12,027 61
Seventh district	3,769 32	22 71	3,746 61	956 13	50 27	15 65	42 91	180 00	83 85	5,064 13	2,040 66	14 32	12,102 70
Eighth district	4,238 25	64 05	4,174 20	999 94	35 99	28 03	5 00	42 00	.....	4,686 49	1,350 37	13 15	11,501 98
Ninth district	1,682 63	5 56	1,677 07	122 00	38 99	8 00	25 42	150 00	12 50	5,352 90	715 92	18 50	8,594 93
Tenth district	1,700 92	12 15	1,688 77	1,152 00	47 50	8 00	43 37	150 00	.....	3,013 19	.....	4 41	5,141 43
Eleventh district	1,500 00	2 11	1,497 89	435 00	38 50	.....	61 50	150 00	.....	3,491 64	252 00	10 57	5,966 73
Total	40,168 78	438 61	39,710 17	8,508 39	640 35	239 65	441 52	1,345 67	416 41	56,689 13	32,998 68	153 31	132,925 97
<b>IOWA.</b>													
First district	2,198 06	12 67	2,185 39	720 00	61 92	21 50	45 78	110 00	.....	5,352 98	.....	12 30	8,497 57
Second district	3,040 57	26 83	3,013 74	600 00	91 03	21 50	110 80	100 00	19 00	5,543 32	1,102 78	15 32	10,640 57
Third district	3,307 54	41 17	3,266 37	642 11	127 97	21 55	83 34	.....	.....	5,758 19	2,277 92	18 57	13,147 45
Fourth district	1,932 91	23 74	1,909 17	654 98	106 95	59 00	126 77	150 00	.....	5,459 70	.....	10 34	8,446 66
Fifth district	1,348 63	9 11	1,340 52	458 56	118 90	46 80	12 40	150 00	51 00	4,344 08	.....	6 99	6,297 96
Sixth district	1,500 00	8 11	1,491 89	399 99	42 46	110 05	120 04	144 00	.....	6,651 98	.....	38 03	8,966 41
Total	13,297 71	108 63	13,119 08	3,465 34	549 23	380 40	498 53	594 00	63 00	34,060 34	3,446 70	105 54	56,116 62
<b>KANSAS.</b>													
Total	2,184 12	11 95	2,172 17	1,425 00	162 78	104 85	214 50	350 00	44 10	12,163 07	994 96	57 29	17,643 13

KENTUCKY.													
First district.	1,074 93	6 91	1,070 01	1,000 00	910 92	6 93	55 95	119 90	109 75	8,490 01	851 13	80 13	13,090 01
Second district.	2,043 30	75 40	2,118 70	1,140 00	843 19	90 34	90 34	150 00	59 85	9,711 54	1,477 00	90 74	43,771 54
Third district.	1,047 10	4 40	1,051 50	1,125 00	40 69	1,1 50	91 45	140 00	708 97	9,704 46	1,477 00	90 74	43,771 54
Fourth district.	2,409 64	80 14	2,489 78	1,750 01	316 71	44 50	91 45	170 00	.....	10,351 97	85,945 48	41 44	41,441 97
Fifth district.	6,161 03	70 43	6,231 46	4,000 00	100 50	9 00	77 90	.....	.....	13,135 63	13,135 63	41 03	24,909 02
Sixth district.	4,004 03	140 50	4,144 53	1,800 00	57 09	18 50	99 50	950 00	75 00	11,100 76	10,403 19	44 40	24,909 02
Seventh district.	9,598 07	900 04	10,498 11	4,300 00	100 54	18 50	99 50	430 00	.....	13,053 81	10,057 00	124 50	30,010 50
Eighth district.	4,146 04	45 30	4,191 34	1,500 00	105 24	7 00	8 00	110 00	54 30	6,490 64	2,497 50	19 01	13,014 46
Ninth district.	2,317 90	34 80	2,352 70	536 75	104 14	7 00	57 04	350 00	107 35	5,517 90	4,271 01	90 98	13,010 50
Total.	30,406 49	547 84	30,954 33	13,043 71	1,066 41	90 55	409 70	1,719 50	1,806 79	84,491 64	122,103 97	401 46	204,414 55
LOUISIANA.													
First district.	4,508 00	37 97	4,545 97	4,075 80	84 91	44 50	.....	.....	.....	91,714 30	6,451 56	83 41	36,940 51
Second district.	2,409 04	0 30	2,409 34	2,409 36	104 23	10 00	30 30	300 00	.....	12,710 76	.....	34 71	17,556 57
Third district.	9,207 76	50 01	9,257 77	8,003 14	300 54	54 50	53 53	600 00	.....	43,303 78	6,451 56	71 95	14,318 88
Total.	16,124 80	88 28	16,213 08	14,488 30	589 68	108 50	138 13	900 00	.....	147,729 84	12,903 12	149 07	68,815 96
MAINE.													
First district.	9,311 07	14 35	9,325 42	1,185 00	81 40	16 75	28 03	300 00	.....	4,516 00	990 00	17 15	9,375 00
Second district.	1,597 54	3 48	1,601 02	424 04	92 36	14 00	90 01	100 00	.....	4,306 96	.....	19 02	6,544 53
Third district.	1,514 10	9 81	1,523 91	403 66	1 50	3 00	51 53	60 00	.....	2,719 50	.....	9 30	5,760 48
Fourth district.	1,500 00	9 11	1,509 11	545 00	15 43	15 63	13 45	72 00	.....	2,831 92	.....	6 21	5,031 05
Fifth district.	1,000 00	11 01	1,011 01	375 00	40 00	14 00	20 47	100 00	.....	3,369 90	.....	11 36	5,033 04
Total.	33,922 71	56 75	34,479 46	20,138 60	170 18	63 34	214 12	638 00	.....	18,417 40	990 00	56 13	34,375 12
MARYLAND.													
First district.	1,666 79	6 08	1,672 87	453 33	1 00	9 25	96 78	180 00	.....	8,859 71	.....	15 32	11,978 17
Second district.	2,077 46	90 91	2,168 37	1,400 00	61 90	17 75	11 30	700 00	.....	9,763 96	.....	21 21	14,819 30
Third district.	2,090 70	24 03	2,114 73	2,000 00	100 86	37 66	37 07	50 00	.....	30,941 37	.....	73 91	46,501 96
Fourth district.	2,394 70	63 06	2,457 76	600 00	33 90	14 50	10 07	50 00	.....	6,523 01	.....	90 04	14,520 50
Fifth district.	4,315 50	63 06	4,378 56	700 00	19 12	60 25	51 64	45 00	.....	9,405 70	3,196 83	19 48	17,600 83
Total.	10,777 50	923 94	11,701 44	6,353 31	206 47	130 93	174 00	915 00	.....	65,715 41	14,083 98	150 16	104,713 14
MASSACHUSETTS.													
First district.	2,000 50	78 80	2,079 30	780 00	10 79	90 19	74 03	900 00	.....	8,946 79	.....	14 00	13,106 59
Second district.	2,000 50	14 65	2,015 15	1,153 32	107 35	19 00	46 40	900 00	.....	6,117 30	.....	15 21	9,449 01
Third district.	2,010 79	37 10	2,047 89	2,006 67	107 43	19 00	54 41	1,000 00	.....	18,556 65	4,392 05	44 68	32,765 60
Fourth district.	2,408 30	57 53	2,465 83	2,024 50	50 53	19 00	74 00	550 00	.....	10,450 65	.....	90 60	32,646 70
Fifth district.	2,408 30	7 63	2,415 93	1,650 00	48 94	13 50	13 44	175 00	.....	9,796 13	1,250 06	89 40	10,350 16
Total.	10,828 19	26 10	11,158 29	6,999 96	33 14	13 50	104 00	350 00	.....	8,011 10	5,096 08	18 74	16,246 53

\* Including items belonging to previous fiscal years not before adjusted.

Statement showing the expenses of assessing the internal revenue taxes in the several collection districts, &amp;c.—Continued.

District.	Gross compen- sation.	Tax.	Net compen- sation.	Clerk hire.	Stationery.	Printing and advertising.	Postage and ex- press.	Hire of assess- ors.	Survey of dis- tricts.	Net compen- sation of assessor. Net compen- sation of assessor.	Net compen- sation of assessor. Net compen- sation of assessor.	Tax on compen- sation of assessor. Tax on compen- sation of assessor.	Total.
<b>MASSACHUSETTS—Con.</b>													
Seventh district.....	\$2,403 81	\$3 97	\$2,399 84	\$1,537 50	\$23 21	\$3 50	\$70 18	\$23 00		\$8,120 80		\$15 30	\$12,475 02
Eighth district.....	2,099 67	4 17	2,095 50	1,460 00	190 53	17 75	73 45	400 00	\$4 35	8,103 32		15 86	12,345 10
Ninth district.....	1,803 99	3 16	1,800 83	1,050 00	50 90	19 50	93 99	300 00	36 50	9,901 32		18 34	13,490 00
Tenth district.....	4,065 32	52 35	4,012 97	1,475 00	84 03	24 62	70 59	550 00	38 55	10,250 56		20 85	18,661 64
Total.....	32,851 90	268 94	32,582 96	16,466 97	705 47	148 99	840 19	3,575 00	79 30	97,464 98		507 09	167,587 92
<b>MICHIGAN.</b>													
First district.....	4,454 66	18 01	4,436 65	1,551 00	66 35	9 50	15 00	500 00		11,284 82		23 92	19,194 28
Second district.....	1,732 16	9 86	1,722 30	815 31	1 45	24 70	29 54	200 00		5,889 67		13 95	9,373 40
Third district.....	2,716 21	62 90	2,653 31	992 97	57 96	18 75	35 65	150 00	36 55	6,636 17		12 58	10,481 71
Fourth district.....	1,708 42	8 40	1,700 02	825 00	44 82	22 60	8 85	143 75		5,565 08		10 85	8,310 12
Fifth district.....	1,607 00	5 50	1,601 50	825 70	138 25	14 50	35 55	155 00		7,019 83		48 35	9,810 24
Sixth district.....	2,608 72	57 89	2,550 83	952 48	49 37	29 35	138 76	178 45		8,887 86		24 59	12,734 10
Total.....	14,827 17	162 77	14,664 40	5,876 46	338 10	119 40	883 35	1,327 20	96 55	45,263 43		134 24	69,833 85
<b>MINNESOTA.</b>													
First district.....	1,722 72	13 33	1,709 39	400 00	73 69	4 50		100 00		6,382 57		17 09	8,670 15
Second district.....	2,095 75	17 06	2,078 69	857 30	143 95	45 00	101 41	300 00		8,656 59		26 61	12,349 90
Total.....	3,818 47	30 39	3,788 08	1,257 30	217 64	49 50	101 41	400 00		15,039 16		43 70	21,030 05
<b>MISSISSIPPI.</b>													
First district.....	2,500 00	6 32	2,493 68	1,425 00	117 18		21 50	255 00		7,504 58		26 64	12,216 04
Second district.....	3,108 27	26 08	3,082 19	1,720 00	196 14	61 75	47 04	300 00		15,435 30		106 51	20,872 42
Third district.....	5,362 36	113 30	5,249 06	1,535 00	110 95	14 20	156 37	412 50		17,455 13		136 15	25,169 25
Total.....	10,970 63	145 70	10,824 93	4,730 00	424 27	75 95	224 91	967 50		40,795 01		260 30	58,256 61
<b>MISSOURI.</b>													
First district.....	0,340 56	61 52	6,298 01	3,790 00	908 47	21 00	30 00	1,000 00		20,070 14		59 83	36,217 36
Second district.....	1,708 24	6 62	1,701 62	875 00	228 10	63 32	822 18	140 00	188 05	7,509 75		14 71	11,711 06



Third district	2,449 10	29 07	2,289 10	1,949 97	406 03	41 00	169 73	889 09	.....	A 433 01	.....	19 10	16,017 06
Fourth district	2,371 31	11 01	2,811 00	2,668 90	3 11	89 00	10 90	136 00	.....	A 153 11	.....	13 04	8,734 30
Fifth district	2,619 10	11 00	2,608 10	2,608 10	10 10	92 41	131 10	188 40	.....	14 07 71	.....	09 00	10,000 00
State district	2,413 15	00 00	2,403 15	1,399 90	1 11	50 01	534 13	600 00	.....	96,340 43	.....	03 05	31,000 00
Total	92,010 30	9 14	91,763 10	9,374 73	1,341 33	113 48	807 90	8,792 30	130 03	71,771 04	10,000 10	97 17	116,712 97
<b>MONTANA.</b>													
Montana	2,000 00	0 01	2,001 30	1,044 06	19 10	.....	31 40	500 00	.....	11,000 04	1,500 00	00 01	17,319 74
<b>NEBRASKA.</b>													
Nebraska	2,081 97	41 11	2,789 90	500 00	107 41	5 01	26 06	940 00	40 50	7,530 00	1,500 00	14 56	13,184 11
<b>NEVADA.</b>													
Nevada	2,740 00	15 02	2,754 14	1,075 00	40 73	231 00	10 00	180 00	.....	7,004 41	.....	53 25	15,165 38
<b>NEW HAMPSHIRE.</b>													
First district	1,799 99	6 23	1,793 36	560 00	12 41	11 20	43 00	60 00	.....	4,467 37	912 00	9 78	7,106 70
Second district	1,901 84	3 14	1,904 10	020 00	37 33	19 50	47 74	150 00	.....	4,907 37	.....	10 92	7,991 04
Third district	1,638 04	9 71	1,647 37	570 00	55 17	17 50	53 43	80 00	.....	2,073 35	.....	6 26	6,403 50
Total	5,339 87	19 10	5,374 03	2,104 00	84 83	49 50	143 31	320 00	36 40	13,346 99	312 00	29 00	31,591 00
<b>NEW JERSEY.</b>													
First district	1,607 93	7 00	1,600 93	929 97	.....	11 40	.....	150 00	.....	11,507 43	.....	19 35	14,390 79
Second district	2,103 90	24 30	2,065 73	1,390 00	98 23	7 50	44 51	500 00	47 40	8,414 13	.....	19 63	13,007 23
Third district	2,709 84	08 52	2,740 94	1,499 90	132 74	14 10	44 89	817 30	.....	13,258 45	1,005 50	95 00	50,449 83
Fourth district	2,615 83	04 54	2,533 15	1,189 00	65 37	21 80	50 25	300 00	100 00	15,200 00	.....	30 34	50,518 44
Fifth district	4,105 19	14 50	4,020 00	2,104 33	151 23	30 00	9 94	135 00	.....	90,054 98	.....	30 00	27,573 30
Total	16,202 74	13 35	16,130 43	7,069 90	320 38	92 10	179 73	982 30	157 30	64,616 40	1,005 50	135 42	83,913 08
<b>NEW MEXICO.</b>													
New Mexico	2,479 04	6 32	2,493 02	844 00	431 25	134 50	27 27	823 80	.....	12,710 44	457 00	40 10	17,321 03
<b>NEW YORK.</b>													
First district (old)	1,937 61	71 29	1,756 39	1,533 33	41 36	.....	36 00	1 74 40	.....	7,794 51	.....	21 00	11,979 09
First district (new)	1,347 44	.....	1,344 44	1,628 67	903 70	37 50	8 50	333 31	.....	35,040 00	1,125 00	.....	20,709 09
Second district (old)	2,655 53	19 52	2,643 41	2,400 00	132 74	.....	3 00	740 10	.....	17,737 14	.....	48 05	32,085 84
Second district (new)	1,244 45	.....	1,244 45	2,016 67	210 71	41 10	29 60	446 00	.....	11,055 01	.....	.....	15,174 39
Third district (old)	4,034 50	34 19	3,990 37	2,400 00	163 63	.....	3 72	984 93	.....	90,314 47	3,735 07	29 03	37,500 14
Third district (new)	1,241 50	.....	1,241 50	1,629 17	47 30	104 00	50 50	554 31	.....	10,171 51	.....	.....	21,570 71
Fourth district	2,661 10	19 50	2,644 30	4,270 50	137 39	.....	5 00	1,041 00	.....	23,753 95	.....	67 64	31,565 19

\* Including items belonging to previous fiscal years not before adjuste

Statement showing the expenses of assessing the internal revenue taxes in the several collection districts, &amp;c.—Continued.

District.	Gross compen- sation.	Tax.	Net compen- sation.	Clerk-hire.	Stationery.	Printing and ad- vertising.	Postage and ex- press.	Rent of mas- sac.	Survey of distri- ctories.	Net compen- sation of assist- ants and messen- gers.	Net compen- sation of store- keepers.	Tax on compen- sation of assist- ants and store-keepers.	Total.
<b>NEW YORK—Cont'd.</b>													
Fifth district.....	\$2,619 24	\$14 31	\$2,604 93	\$2,682 47	\$51 99	\$4 00	\$3 50	\$466 67	.....	\$10,687 28	\$24 55	\$26 74	\$16,505 49
Sixth district.....	9,949 54	30 95	9,918 59	9,966 61	157 83	4 00	10 00	333 66	.....	11,715 43	.....	98 42	16,003 15
Seventh district.....	9,549 74	19 52	9,529 22	9,568 67	40 31	.....	.....	333 32	.....	11,820 96	.....	27 50	16,011 01
Eighth district.....	4,926 25	19 80	4,906 45	4,945 25	182 81	10 40	11 50	1,533 32	.....	96,947 40	.....	52 82	36,583 69
Ninth district.....	4,091 40	17 94	4,073 46	4,111 40	93 66	12 50	95 00	1,140 00	.....	12,876 28	500 82	45 81	32,639 69
Tenth district.....	4,578 13	109 93	4,468 18	4,578 13	117 93	17 50	81 60	300 00	\$24 75	15,416 84	.....	99 47	31,922 96
Eleventh district.....	9,161 20	24 72	9,136 48	9,181 20	117 32	5 00	71 20	900 00	.....	10,365 47	.....	88 61	13,600 67
Twelfth district.....	9,352 14	16 72	9,335 42	9,382 14	117 32	7 50	9 50	187 50	55 13	9,494 16	.....	82 97	13,692 69
Thirteenth district.....	1,082 24	29 72	1,052 52	1,082 24	51 78	30 24	26 00	167 50	.....	11,874 24	.....	11 97	6,978 92
Fourteenth district.....	3,772 84	14 37	3,758 47	3,792 84	89 75	12 75	82 75	500 00	.....	11,469 14	.....	18 73	16,832 10
Fifteenth district.....	1,510 00	9 11	1,500 89	1,510 00	60 45	4 25	31 30	400 00	.....	4,697 31	.....	7 10	6,125 76
Sixteenth district.....	1,517 63	9 11	1,508 52	1,517 63	60 45	7 21	31 30	85 00	.....	2,693 63	63 36	18 86	11,066 70
Seventeenth district.....	9,517 63	29 80	9,487 83	9,517 63	17 77	24 73	30 87	178 75	.....	7,362 36	.....	11 39	7,781 32
Eighteenth district.....	1,674 53	8 50	1,666 03	1,674 53	70 65	28 53	33 59	200 00	.....	5,197 65	.....	25 46	7,806 50
Nineteenth district.....	1,674 53	8 50	1,666 03	1,674 53	70 65	28 53	33 59	200 00	.....	5,197 65	.....	25 46	7,806 50
Twentieth district.....	2,868 84	8 50	2,860 34	2,868 84	111 00	18 72	39 02	300 00	.....	7,383 31	784 96	25 46	12,231 24
Twenty-first district.....	2,868 84	8 50	2,860 34	2,868 84	111 00	18 72	39 02	300 00	.....	7,383 31	784 96	25 46	12,231 24
Twenty-second district.....	4,213 10	26 67	4,186 43	4,213 10	12 75	1 50	13 49	497 46	.....	8,601 18	2,501 92	19 46	15,662 55
Twenty-third district.....	3,662 50	26 60	3,635 90	3,662 50	91 59	19 50	41 85	135 00	.....	7,967 56	1,761 92	18 99	17,602 43
Twenty-fourth district.....	3,167 60	7 02	3,160 58	3,167 60	51 23	18 25	72 76	85 00	2 30	4,914 22	206 96	21 30	9,221 53
Twenty-fifth district.....	1,972 92	7 02	1,965 90	1,972 92	126 84	10 50	103 42	188 63	6 08	6,030 67	.....	12 62	9,372 50
Twenty-sixth district.....	1,966 70	10 35	1,956 35	1,966 70	70 05	12 50	103 42	188 63	.....	6,132 67	.....	13 62	9,372 50
Twenty-seventh district.....	3,847 57	32 93	3,814 64	3,847 57	40 43	9 50	34 70	500 00	.....	9,749 07	422 96	19 69	16,186 28
Twenty-eighth district.....	2,890 91	45 79	2,845 12	2,890 91	121 53	15 50	29 41	110 34	.....	8,609 12	1,021 24	28 43	13,259 61
Twenty-ninth district.....	6,612 45	95 67	6,516 78	6,612 45	139 12	30 00	103 90	400 00	.....	10,942 53	7,033 47	42 11	34,117 80
Thirtieth district.....	1,774 87	17 91	1,756 96	1,774 87	51 11	.....	136 44	67 83	.....	5,363 23	.....	16 40	8,017 53
Thirty-first district.....	4,253 77	16 74	4,237 03	4,253 77	570 76	45 00	40 00	.....	.....	51,246 59	7,831 32	110 45	71,035 91
Thirty-second district.....	97,659 81	945 01	96,714 80	97,659 81	3,747 62	660 37	1,378 00	14,822 34	157 47	447,748 97	29,291 31	938 86	628,983 34
<b>NORTH CAROLINA.</b>													
First district.....	2,164 84	8 33	2,156 51	2,164 84	124 93	7 55	35 97	150 00	.....	11,562 01	.....	34 88	14,855 16
Second district.....	2,164 84	8 33	2,156 51	2,164 84	124 93	58 75	11 28	187 50	.....	6,486 24	.....	56 76	10,077 26
Third district.....	2,000 00	4 21	1,995 79	2,000 00	74 32	3 00	43 50	75 00	70 15	5,537 42	.....	13 12	8,040 43
Fourth district.....	3,244 45	90 54	3,223 89	3,244 45	50 50	11 00	51 14	287 50	30 00	13,821 62	.....	31 27	18,099 47

## REPORT OF THE SECRETARY OF THE TREASURY.

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District	Area	Population	Value	Ratio
First district	100.00	100.00	100.00	1.00
Second district	100.00	100.00	100.00	1.00
Third district	100.00	100.00	100.00	1.00
Fourth district	100.00	100.00	100.00	1.00
Fifth district	100.00	100.00	100.00	1.00
Sixth district	100.00	100.00	100.00	1.00
Seventh district	100.00	100.00	100.00	1.00
Eighth district	100.00	100.00	100.00	1.00
Ninth district	100.00	100.00	100.00	1.00
Tenth district	100.00	100.00	100.00	1.00
Eleventh district	100.00	100.00	100.00	1.00
Twelfth district	100.00	100.00	100.00	1.00
Thirteenth district	100.00	100.00	100.00	1.00
Fourteenth district	100.00	100.00	100.00	1.00
Fifteenth district	100.00	100.00	100.00	1.00
Sixteenth district	100.00	100.00	100.00	1.00
Seventeenth district	100.00	100.00	100.00	1.00
Eighteenth district	100.00	100.00	100.00	1.00
Nineteenth district	100.00	100.00	100.00	1.00
Total	100.00	100.00	100.00	1.00

Including items belonging to previous fiscal years not before adjusted.

Statement showing the expenses of assessing the internal revenue taxes in the several collection districts, &c.—Continued.

District.	Gross compen- sation.	Tax.	Net compen- sation.	Clerk-hire.	Stationery.	Printing and ad- vertising.	Postage and ex- press.	Rent of mas- sars.	Survey of distri- ctories.	Net compen- sation of mas- sars and keepers.	Net compen- sation of mas- sars and keepers.	Total.
<b>PENNSYLVANIA.—Con.</b>												
Fourteenth district*..	\$2,101 18	\$18 55	\$2,082 63	\$1,125 00	\$23 45	\$25 00	\$13 12	\$150 00	\$2 50	\$9,543 99	\$3,100 88	\$16,074 07
Fifteenth district*..	2,945 87	26 92	2,918 95	1,500 00	94 07	13 62	41 65	500 00	32 50	12,588 09	6,007 28	21,366 16
Sixteenth district*..	1,573 26	19 81	1,553 45	866 61	13 21	23 45	50 00	50 00	50 00	8,636 54	10,315 66	21,748 92
Seventeenth district*..	1,603 63	15 16	1,588 47	369 00	54 77	14 50	30 75	88 46	98 50	3,869 99	63 16	6,117 96
Eighteenth district*..	2,782 24	16 24	2,766 00	687 97	42 62	14 50	101 81	119 91	5 00	8,183 03	400 00	11,312 96
Nineteenth district*..	2,474 60	57 55	2,416 84	928 00	47 53	18 50	8 50	119 91	3 85	8,036 03	1,020 18	12,562 58
Twentieth district*..	2,573 80	34 43	2,539 37	1,350 00	71 17	19 50	103 41	148 31	5 00	9,837 62	4,017 91	18,114 00
Twenty-first district*..	4,421 63	74 85	4,346 78	1,900 00	82 43	14 00	52 66	81 75	56 75	8,743 34	16,788 03	32,825 83
Twenty-second dist.*.	3,371 03	22 21	3,348 82	2,640 99	103 35	9 23	73 67	800 00	28 48	9,711 12	3,816 88	26,851 51
Twenty-third district*.	3,675 03	35 75	3,639 28	1,500 00	61 33	15 00	50 97	300 00	41 75	5,311 65	5,966 00	21,242 18
Twenty-fourth dist.*.	3,897 13	55 78	3,841 35	723 25	70 35	14 12	34 07	103 65	41 75	5,311 65	12,563 76	22,723 99
Total.....	73,649 77	863 03	72,786 74	37,016 67	1,506 02	310 99	963 01	6,520 11	245 62	961,045 11	87,465 92	468,005 13
<b>RHODE ISLAND.</b>												
First district*..	3,478 06	13 25	3,464 81	1,901 92	48 72	24 50	33 23	500 00	.....	14,680 80	926 96	20,375 03
Second district.....	1,533 44	3 78	1,529 66	690 00	11 55	16 62	18 19	500 00	.....	5,250 38	.....	7,716 38
Total.....	5,011 50	17 03	4,994 47	2,591 92	54 27	41 12	51 42	200 00	.....	19,931 23	226 96	28,071 41
<b>SOUTH CAROLINA.</b>												
First district*..	4,403 54	77 88	4,325 66	.....	467 03	7 00	95 80	165 50	18 75	9,385 90	94 00	14,469 64
Second district*..	2,651 02	14 16	2,636 86	2,949 99	2 00	14 00	17 44	240 00	.....	9,730 15	.....	11,637 40
Third district.....	2,688 63	21 94	2,666 69	1,110 00	116 07	10 50	52 75	240 00	.....	9,632 54	.....	13,838 55
Total.....	9,750 37	114 00	9,636 37	1,359 99	585 10	31 50	163 99	405 50	18 75	27,749 59	24 00	39,945 59
<b>TENNESSEE.</b>												
First district.....	2,000 00	4 21	1,995 79	866 00	53 96	11 50	25 06	92 03	.....	9,096 58	.....	5,973 11
Second district.....	1,285 89	4 21	1,281 67	1,275 00	70 41	6 00	67 00	224 00	41 00	6,158 98	374 00	10,926 63
Third district.....	2,253 74	5 10	2,248 64	1,374 88	192 51	.....	86 00	235 00	206 00	7,029 57	111 52	11,245 16
Fourth district.....	2,000 00	4 21	1,995 79	690 00	367 03	13 21	30 77	144 00	88 50	8,302 04	2,330 80	13,544 83
Fifth district.....	3,616 45	31 05	3,585 40	1,900 00	101 16	47 35	42 19	340 00	21 00	11,929 64	5,301 96	21,242 18
Sixth district.....	2,000 03	4 21	1,995 71	1,042 66	30 99	8 00	4 00	137 50	57 00	5,387 78	1,540 81	10,191 46

Seventh district* Eighth district	9,011 57 9,240 14	4 51 9 51	2,500 71 2,780 01	1,121 00 9,000 00	3,121 00 1,780 00	714 51 1,011 19	90 00 11 00	81 00 44 00	100 00 600 00	421 00	57,614 40	131 91	8 46 31 70	7 77 17 10 70 01
Total	18,250 71	14 02	5,280 71	10,121 00	4,900 00	1,791 50	101 00	125 00	1,600 00		57,614 40	131 91	8 46 31 70	7 77 17 10 70 01
TEXAS.														
First district*	9,040 99	31 37	2,555 65	1,697 40	1,697 40	8 40			400 00		6,931 19		33 33	12,016 03
Second district*	9,500 00	0 38	2,483 04	1,405 00	1,405 00	78 05			300 00		6,381 06		35 09	13,818 48
Third district*	9,301 00	0 39	2,265 54	1,393 00	1,393 00	406 51			400 00		12,437 14		143 80	17,064 00
Fourth district*	9,710 97	10 71	2,773 56	1,500 00	1,500 00	97 06			400 00		15,100 00		179 70	22,195 86
Total	10,760 96	00 09	10,704 41	5,877 40	5,877 40	584 02			1,600 00		46,857 84		445 54	66,049 16
UTAH.														
Utah*	9,403 04	0 70	2,497 30	900 92	900 92	94 70			600 00		6,305 01		34 93	11,301 31
VERMONT.														
First district	1,500 00	9 11	1,407 80	41 00	41 00	91 84			187 50		3,743 49		10 17	5,579 70
Second district	1,500 00	9 11	1,407 80	101 50	101 50	53 99			62 00		3,683 08		5 43	4,077 09
Third district	1,940 80	14 05	1,174 75	514 93	514 93	47 83			900 00		7,078 50		06 39	9,940 01
Total	4,940 80	18 27	4,970 35	746 03	746 03	192 56			440 50		13,505 14		81 80	20,196 50
VIRGINIA.														
First district*	1,740 04	13 74	1,735 94	940 00	940 00	44 99			72 00		6,007 68		31 34	8,167 59
Second district*	3,318 50	10 90	3,309 30	1,457 70	1,457 70	151 56			39 07		11,404 03		21 05	17,650 93
Third district*	4,317 83	90 13	4,351 78	9,100 90	9,100 90	104 65			177 51		8,054 37		22 04	18,632 50
Fourth district*	1,950 37	94 97	1,938 10	1,060 50	1,060 50	170 04			529 99		9,512 04		24 13	12,009 71
Fifth district*	4,573 19	37 10	4,530 04	1,250 60	1,250 60	160 41			147 52		8,025 04		20 30	15,633 01
Sixth district*	2,494 50	30 47	2,450 03	1,500 00	1,500 00	307 04			326 67		12,095 01		23 73	27,009 77
Seventh district*	1,400 07	10 36	1,400 38	1,000 00	1,000 00	39 81			150 00		6,740 81		10 02	10,933 36
Eighth district*	1,500 00	9 11	1,407 80	404 90	404 90	53 81			250 00		4,963 43		9 02	7,519 08
Total	31,407 03	178 47	31,084 38	8,054 87	8,054 87	1,164 29			1,903 06		69,064 51		176 49	118,485 70
WASHINGTON.														
Washington	3,000 00	8 49	2,991 56	483 00	483 00	100 99			200 00		4,994 06		10 88	9,763 48
WEST VIRGINIA.														
First district*	9,673 74	10 67	9,663 11	1,900 00	1,900 00	106 90			50 75		6,554 89		8 89	11,627 70
Second district*	9,341 83	93 90	9,316 63	600 00	600 00	33 41			50 00		4,938 70		20 15	9,929 80
Third district	1,378 37	9 11	1,374 96	483 00	483 00	70 83			60 00		4,040 08		10 60	6,010 64
Total	21,393 94	34 00	21,354 68	2,983 00	2,983 00	211 93			110 00		16,533 65		39 00	27,760 54

\* Including items belonging to previous fiscal years not before adjusted.

† Complete returns for the district not received at this office.

Statement showing the expenses of assessing the internal revenue taxes in the several collection districts, &amp;c.—Continued.

District.	Gross compensa- tion.	Tax.	Net compensa- tion.	Clerk-hiro.	Stationery.	Printing and ad- vertising.	Postage and ex- press.	Rent of assess- ors.	Survey of distric- tories.	Net compensa- tion of assessor.	Net compensa- tion of store- keepers.	Tax on compen- sation of assessor and store-keepers.	Total.
<b>WISCONSIN.</b>													
First district*	\$4,960 33	\$23 38	\$4,933 65	\$2,497 98	\$111 28	\$11 50	\$48 76	\$500 00	.....	\$13,188 49	\$7,107 84	\$28 55	\$28,490 73
Second district*	1,743 31	10 97	1,732 34	1,375 00	100 47	99 50	120 73	104 17	.....	6,350 86	1,006 98	11 86	11,833 03
Third district*	1,500 00	9 11	1,490 89	1,170 00	39 08	14 19	94 53	190 00	.....	6,009 55	.....	19 35	9,033 19
Fourth district*	1,736 36	13 91	1,722 45	715 00	62 41	59 35	96 74	100 00	.....	4,998 04	.....	17 70	7,036 89
Fifth district*	1,547 40	4 48	1,543 01	665 00	62 41	23 40	33 03	56 25	.....	6,106 47	.....	18 75	8,677 81
Sixth district*	1,872 27	11 63	1,860 64	540 00	134 98	19 80	189 47	240 00	.....	7,015 73	.....	19 32	9,990 60
Total	13,385 76	65 46	13,320 28	6,362 98	438 85	183 67	593 28	1,190 42	.....	43,630 07	8,714 90	106 53	74,333 35
<b>WYOMING.</b>													
Wyoming	2,400 76	6 32	2,403 44	.....	86 60	5 00	49 00	300 00	.....	856 60	.....	2 51	3,790 82

## RECAPITULATION.

Alabama	\$11,214 49	\$160 88	\$11,047 91	\$6,849 88	\$414 95	\$64 50	\$230 72	\$398 00	\$27 80	\$34,730 87	\$1,186 42	\$251 77	\$54,831 05
Arizona	2,500 00	6 32	2,493 68	2,838 30	32 50	37 00	15 99	300 00	.....	2,109 01	375 53	7 97	5,353 71
Arkansas	6,503 36	29 12	6,476 24	1,435 00	203 50	172 74	257 62	800 00	.....	108,724 10	384 92	99 26	33,682 91
California	16,410 89	176 78	16,234 11	12,358 72	667 33	335 93	4,032	3,490 91	321 15	4,335 89	6,818 39	1,830 87	140,400 96
Colorado	2,500 00	6 32	2,493 68	1,452 50	38 85	130 35	68 50	2,000 00	.....	31,672 56	5,803 84	15 73	9,018 47
Connecticut	10,703 62	42 13	10,751 49	4,000 00	260 77	42 75	363 29	735 00	137 62	1,935 16	.....	18 54	54,007 32
Dakota	3,530 07	61 80	3,518 27	.....	64 03	6 00	46 61	210 00	.....	10,404 89	.....	22 47	5,800 07
Delaware	3,061 51	16 81	3,044 70	1,375 00	78 62	49 62	77 56	490 00	127 90	8,881 56	.....	17 47	13,128 87
District of Columbia	2,345 32	8 16	2,337 16	1,735 00	72 66	49 62	10 00	375 00	.....	56,778 74	571 00	250 87	77,948 93
Florida	2,703 90	12 50	2,691 40	1,435 00	179 43	100 50	168 92	1,301 52	60 50	10,928 05	1,532 93	37 38	15,374 30
Georgia	10,886 27	46 33	10,839 92	7,350 00	585 38	48 75	413 01	1,000 00	.....	5,117 91	60,810 63	407 54	283,065 17
Idaho	2,516 36	7 13	2,509 23	248 00	16 00	69 50	17 00	2,345 43	337 70	115,095 19	23,076 68	153 31	131,225 97
Illinois	67,362 23	1,011 60	66,350 63	15,477 28	1,046 35	364 43	441 52	5,504 00	418 41	56,620 34	3,446 70	103 54	150,116 62
Indiana	40,168 78	453 61	39,710 17	8,508 39	239 65	290 40	498 53	3,000 00	63 00	12,103 87	9,004 00	27 29	103,516 62
Iowa	13,227 71	108 63	13,119 08	3,463 34	549 23	104 55	214 50	1,712 50	44 00	84,401 68	132,103 97	401 48	264,814 53
Kansas	2,184 12	11 95	2,172 17	1,435 00	1,024 78	104 55	409 70	1,000 00	1,200 72	41,503 74	6,451 54	180 37	68,515 96
Kentucky	36,806 40	597 88	36,218 61	13,081 71	1,068 81	104 55	409 70	1,000 00	.....	18,817 90	.....	50 13	39,373 12
Louisiana	9,507 76	50 61	9,457 15	8,003 14	2,370 58	54 50	55 23	638 00	.....	18,817 90	.....	50 13	39,373 12
Maine	8,543 40	34 36	8,509 04	2,943 60	170 14	63 38	211 12	.....	.....	.....	.....	.....	.....

Maryland	14,777.26	623.89	14,353.94	6,203.21	8,068.97	139.93	174.06	919.00	79.30	65,113.91	14,608.09	139.16	394,713.14
Massachusetts	33,851.00	889.94	33,360.00	16,408.97	703.47	144.00	869.19	3,275.00	79.30	97,464.99	14,608.09	139.16	394,713.14
Michigan	14,997.11	149.11	14,997.11	3,970.46	258.10	119.40	863.35	2,297.00	100.55	45,003.43	1,914.06	134.94	107,207.03
Minnesota	3,819.47	30.39	3,789.08	1,327.30	101.64	49.50	101.41	4,400.00	...	15,039.16	1,660.96	43.70	68,033.03
Mississippi	11,970.43	143.79	11,826.64	4,740.00	424.27	75.95	394.91	867.50	...	46,795.01	1,660.96	43.70	68,033.03
Missouri	32,616.34	323.36	32,292.98	9,274.15	1,312.33	312.63	869.90	3,275.00	139.05	11,971.64	10,409.16	60.67	116,113.97
Montana	9,000.00	0.46	9,000.00	3,044.06	89.81	...	31.40	5,000.00	...	11,065.34	1,599.60	60.67	116,113.97
Nebraska	2,921.97	41.11	2,780.16	1,000.00	107.41	5.00	26.60	949.00	43.30	7,529.00	1,502.60	14.56	31,314.11
Nevada	2,740.00	15.92	2,724.08	1,073.00	40.72	93.00	10.00	169.00	...	7,904.41	...	53.32	13,185.39
New Hampshire	2,333.31	19.18	2,352.49	844.00	40.72	93.00	10.00	169.00	...	13,246.99	1,012.00	53.32	13,185.39
New Jersey	10,892.76	136.35	10,756.41	7,694.96	44.93	49.50	179.73	892.50	137.30	68,616.44	1,012.00	135.42	85,913.06
New Mexico	2,409.94	6.32	2,403.62	844.00	421.35	134.50	97.97	532.90	...	15,710.44	457.60	46.19	17,261.63
New York	97,650.81	945.01	96,705.80	64,434.04	3,747.68	609.37	3,778.00	14,922.34	157.47	447,744.27	50,391.39	958.90	656,993.34
North Carolina	18,056.31	81.36	17,974.95	7,897.00	477.99	118.05	287.55	1,500.00	100.15	56,041.30	4,946.30	190.64	85,994.91
Ohio	62,091.51	1,160.97	60,930.54	30,944.04	1,525.76	319.00	911.54	4,202.95	119.35	137,473.42	70,928.45	264.60	310,374.97
Oregon	2,729.25	17.56	2,711.69	439.00	110.77	111.50	49.98	375.00	4.75	7,630.69	...	51.83	11,492.65
Pennsylvania	73,649.77	669.09	72,980.68	37,016.67	1,266.02	310.99	963.01	6,250.11	945.02	381,045.11	87,465.92	727.55	468,065.12
Rhode Island	5,011.56	17.03	4,994.47	9,201.92	54.97	41.19	53.42	990.00	...	19,931.35	590.96	48.03	36,091.41
South Carolina	18,736.85	114.00	18,622.85	1,320.90	565.03	31.50	165.99	405.50	18.75	37,740.39	54.00	331.00	50,400.29
Tennessee	10,709.00	60.62	10,648.38	10,123.64	671.39	133.50	330.94	1,898.50	431.00	57,674.90	9,204.40	141.75	59,400.97
Texas	10,709.00	60.62	10,648.38	10,123.64	671.39	133.50	330.94	1,898.50	431.00	57,674.90	9,204.40	141.75	59,400.97
Utah	2,493.64	6.32	2,487.32	969.02	54.62	51.00	57.08	1,640.00	50.50	46,857.84	...	445.54	60,009.16
Vermont	4,908.40	16.57	4,891.83	748.03	193.56	56.95	83.65	600.00	34.60	6,303.91	769.47	34.93	11,201.31
Virginia	31,407.65	176.47	31,231.18	8,956.87	1,164.32	210.80	839.79	449.50	368.06	13,503.14	14,147.94	170.49	50,130.80
Washington	3,000.00	4.42	2,995.58	9,265.00	1,160.99	17.00	19.05	1,933.66	...	60,964.51	4,994.86	318,465.70	318,465.70
West Virginia	6,292.00	36.00	6,256.00	2,245.00	211.33	146.50	47.55	200.00	16.00	16,153.65	2,506.61	30.90	9,703.48
Wisconsin	13,265.74	65.44	13,200.30	6,262.96	438.55	153.67	203.38	1,190.42	...	43,650.07	8,714.60	168.53	57,760.54
Wyoming	2,439.76	6.32	2,433.44	...	86.09	5.00	49.00	200.00	...	856.69	...	2.51	71,353.55
Grand total	762,970.77	7,836.98	755,133.79	230,936.63	92,865.18	6,107.39	14,172.50	61,294.31	4,541.95	2,341,508.65	512,898.76	8,966.49	4,042,548.06
Amount of taxes	...	...	...	...	...	...	...	...	...	...	...	...	16,824.77
	...	...	...	...	...	...	...	...	...	...	...	...	4,050,372.83

\* Including items belonging to previous fiscal years not before adjusted.

NOTE.—The districts marked "old" and "new" are those that have been consolidated, and show the amount of expenses previous and subsequent to consolidation.

NOTE.—There was refunded by distillers during the fiscal year, as pay of store-keepers, the sum of \$257,825.41, which was carried into the Treasury as miscellaneous receipts. This, if not accounted for as receipts, could be deducted from the expenses, it being by law a reimbursement in form of the pay of store-keepers.

## PAPERS ACCOMPANYING THE

*Statement showing the expenses of collecting the internal revenue taxes in the several collection districts, including the commissions, salaries, and extra allowances of the collectors; the office expenses which are paid out of the commissions and extra allowances; and the assessments and collections from July 1, 1870, to June 30, 1871.*

District.	Gross compensation.	Tax.	Net compensation.	Stationery and blank books.	Postage.	Express and dep. money.	Advertising.	Total expense of collecting.	Expenses of administering office.	Assessments.	Collections.
<b>ALABAMA.</b>											
First district*	\$7,933 27	\$77 67	\$7,856 60	\$111 79	\$53 37	.....	\$9 00	\$8,086 43	\$4,836 34	\$143,313 99	\$132,325 53
Second district*	10,615 95	15 73	10,600 23	116 36	292 99	.....	.....	10,933 30	15,586 41	115,556 55	135,734 43
Third district	7,912 63	42 74	7,869 89	84 60	53 00	.....	53 50	8,131 73	1,123 76	36,681 69	57,556 72
Total.....	26,460 85	95 13	26,365 72	312 75	318 36	.....	61 50	27,153 46	24,536 41	295,552 23	325,606 67
<b>ARIZONA.</b>											
Arizona.....	2,976 98	.....	2,976 98	.....	6 00	.....	.....	2,982 98	476 98	13,446 54	18,027 92
<b>ARKANSAS.</b>											
First district*	5,520 54	13 01	5,508 53	102 07	127 67	\$30 00	46 50	5,816 78	5,415 07	60,833 99	48,015 04
Second district	7,792 91	2 11	7,790 80	106 33	114 00	63 66	.....	8,076 90	6,133 15	47,359 53	56,547 35
Third district*	1,950 86	9 84	1,941 02	.....	44 00	6 30	.....	2,001 06	1,468 67	54,664 10	59,152 84
Total.....	15,264 31	23 96	15,240 35	208 40	285 67	89 86	46 50	15,894 74	13,036 89	162,857 62	133,715 23
<b>CALIFORNIA.</b>											
First district, (old)*	16,588 70	16 85	16,571 85	205 13	113 65	.....	.....	16,907 48	11,888 70	2,112,376 44	2,261,159 43
First district, (new)	4,657 50	.....	4,657 50	237 13	161 50	154 99	97 51	5,338 63	3,437 50	1,501,423 72	598,678 41
Second district*	7,115 36	47 43	7,067 93	84 35	194 50	511 87	34 83	7,940 91	7,024 17	206,439 94	229,178 73
Third district	11,049 17	100 00	10,949 17	299 07	147 05	192 69	57 50	11,745 47	7,360 10	175,557 69	145,139 75
Fourth district	9,500 77	111 93	9,388 84	252 75	331 75	593 31	47 00	10,725 58	8,169 47	247,290 11	316,692 11
Fifth district	11,920 00	.....	11,920 00	224 74	260 43	392 21	119 68	12,817 30	8,346 00	194,689 61	100,832 65
Total.....	60,761 50	276 21	60,485 29	1,303 17	1,208 93	1,845 05	336 72	65,475 37	46,825 84	4,367,777 51	3,681,030 48
<b>COLORADO.</b>											
Colorado.....	10,394 56	30 22	10,364 34	66 45	81 65	.....	139 00	10,681 66	5,652 93	57,711 17	60,993 65
<b>CONNECTICUT.</b>											
First district	9,139 27	94 83	9,114 44	66 31	123 00	.....	9 40	9,337 98	3,008 29	673,241 35	643,343 19
Second district	7,297 51	10 37	7,287 14	1 00	224 52	.....	10 75	7,533 78	3,563 01	386,131 11	370,108 54
Third district	5,048 28	19 50	5,028 78	54 99	150 00	.....	67 00	5,380 91	1,400 00	176,952 37	154,851 68



Fourth district	1,717 00	0 40	1,716 60	0 00	0 00	0 00	0 00	0 00	0 00
Total	1,717 00	0 40	1,716 60	0 00	0 00	0 00	0 00	0 00	0 00
IDAHO.									
First district	1,717 00	0 40	1,716 60	0 00	0 00	0 00	0 00	0 00	0 00
Second district	7,750 70	06 31	7,746 37	43 04	107 40	00 55	00 55	00 55	00 55
Third district	0,170 00	19 50	0,150 00	00 00	00 00	00 00	00 00	00 00	00 00
Fourth district	15,300 07	70 80	15,229 08	192 34	908 07	00 00	00 00	00 00	00 00
Total	15,300 07	70 80	15,229 08	192 34	908 07	00 00	00 00	00 00	00 00
ILLINOIS.									
First district	4,300 21	10 57	4,289 71	107 87	14 48	00 00	00 00	00 00	00 00
Second district	7,300 05	33 60	7,266 45	00 00	155 30	00 00	00 00	00 00	00 00
Third district	8,740 00	33 60	8,706 40	00 00	108 30	00 00	00 00	00 00	00 00
Fourth district	10,000 00	15 51	9,984 49	00 00	150 51	00 00	00 00	00 00	00 00
Total	30,340 26	304 51	30,040 75	262 99	444 29	00 00	00 00	00 00	00 00
INDIANA.									
First district	8,000 34	31 07	7,974 07	18 75	30 48	00 00	00 00	00 00	00 00
Second district	0,000 00	00 00	0,000 00	00 00	00 00	00 00	00 00	00 00	00 00
Third district	0,000 00	00 00	0,000 00	00 00	00 00	00 00	00 00	00 00	00 00
Fourth district	0,000 00	00 00	0,000 00	00 00	00 00	00 00	00 00	00 00	00 00
Fifth district	0,000 00	00 00	0,000 00	00 00	00 00	00 00	00 00	00 00	00 00
Sixth district	0,000 00	00 00	0,000 00	00 00	00 00	00 00	00 00	00 00	00 00
Seventh district	0,000 00	00 00	0,000 00	00 00	00 00	00 00	00 00	00 00	00 00
Eighth district	0,000 00	00 00	0,000 00	00 00	00 00	00 00	00 00	00 00	00 00
Ninth district	0,000 00	00 00	0,000 00	00 00	00 00	00 00	00 00	00 00	00 00
Tenth district	0,000 00	00 00	0,000 00	00 00	00 00	00 00	00 00	00 00	00 00
Eleventh district	0,000 00	00 00	0,000 00	00 00	00 00	00 00	00 00	00 00	00 00
Twelfth district	0,000 00	00 00	0,000 00	00 00	00 00	00 00	00 00	00 00	00 00
Thirteenth district	0,000 00	00 00	0,000 00	00 00	00 00	00 00	00 00	00 00	00 00
Total	8,000 34	31 07	7,974 07	18 75	30 48	00 00	00 00	00 00	00 00

\* Including items which belonged to previous fiscal years not before adjusted.

† Complete returns not received from collector.

Statement showing the expenses of collecting the internal revenue taxes, &amp;c.—Continued.

District.	Gross com- pensation.	Tax.	Net com- pensation.	Stationery and blank- books.	Postage.	Express and dep. money.	Advertis- ing.	Total ex- pense of col- lecting.	Expenses of administering office.	Assessments.	Collections.
<b>INDIANA.</b>											
First district.....	\$10,305 96	\$10 45	\$10,294 81	\$186 97	\$29 19	.....	\$29 75	\$10,543 47	\$2,156 85	\$941,217 28	\$703,061 08
Second district.....	4,777 75	10 06	4,767 69	161 97	81 00	.....	67 00	5,087 73	1,630 40	153,168 04	119,067 93
Third district.....	8,711 61	5 61	8,705 99	95 48	86 73	\$10 00	50 90	8,939 73	5,327 46	457,503 97	487,163 60
Fourth district.....	15,359 61	51 43	15,308 18	885 37	300 50	.....	27 50	15,973 98	3,301 66	9,148,533 87	1,814,684 96
Fifth district.....	5,408 47	37 49	5,370 99	69 54	131 49	.....	.....	5,698 50	639 00	143,401 40	160,048 98
Sixth district.....	7,529 24	32 18	7,497 06	99 94	97 14	.....	59 15	7,783 47	9,228 53	340,523 41	379,629 90
Seventh district.....	8,923 87	37 19	8,886 68	118 68	59 83	.....	33 00	8,465 37	412,419 43	419,969 37	427,511 83
Eighth district.....	8,302 20	36 74	8,265 46	169 86	275 00	.....	50 45	8,866 51	1,996 37	543,395 33	419,969 37
Ninth district.....	4,925 28	13 83	4,911 45	169 86	25 02	.....	14 55	5,065 85	1,496 11	138,806 48	141,650 35
Tenth district.....	4,111 75	8 93	4,102 83	24 63	41 80	85 93	14 55	4,398 31	1,218 13	77,889 97	87,056 34
Eleventh district.....	3,948 86	5 09	3,943 77	56 17	116 28	.....	15 00	4,136 31	9,083 04	36,227 53	35,974 63
Total.....	81,706 90	228 99	81,467 91	1,357 96	1,238 97	95 93	420 80	84,820 55	23,918 60	5,323,264 65	4,840,169 68
<b>IOWA.</b>											
First district.....	5,451 90	13 51	5,438 48	103 53	161 00	.....	36 75	5,753 97	2,323 72	167,751 15	195,198 64
Second district.....	9,733 79	94 30	9,639 49	211 65	243 02	.....	142 35	10,359 71	4,676 57	372,403 17	396,620 53
Third district.....	10,418 04	142 30	10,275 74	273 28	363 00	.....	50 05	11,106 37	2,534 35	368,914 89	351,178 73
Fourth district.....	3,765 30	8 03	3,757 27	100 73	191 39	50	58 00	4,110 03	1,898 95	60,355 27	75,513 11
Fifth district.....	5,185 42	3 11	5,182 31	128 66	209 37	.....	37 90	5,663 03	2,885 03	68,967 63	92,135 45
Sixth district.....	12,741 19	35 93	12,705 26	173 35	256 19	.....	105 60	13,317 53	2,042 04	64,049 90	96,733 94
Total.....	47,925 82	296 77	47,629 05	991 22	1,455 97	41 70	430 55	50,185 26	16,369 86	998,442 01	1,097,380 10
<b>KANSAS.</b>											
Kansas.....	12,002 27	119 29	11,882 98	370 57	468 99	.....	227 00	13,078 83	5,914 20	232,807 83	238,834 28
<b>KENTUCKY.</b>											
First district.....	5,623 82	10 18	5,613 64	292 05	276 00	.....	14 70	6,166 57	2,184 29	903,011 34	906,575 31
Second district.....	6,922 05	10 66	6,911 39	100 31	900 42	63 83	10 00	7,335 60	3,680 14	376,517 69	317,039 16
Third district.....	5,044 84	8 61	5,036 23	65 97	107 40	.....	.....	5,978 91	1,420 00	140,604 86	138,023 98
Fourth district.....	9,278 49	19 84	9,258 65	127 57	366 00	744 90	14 07	10,489 56	5,900 85	452,093 60	460,539 19
Fifth district.....	13,569 80	139 10	13,430 70	448 86	124 50	.....	119 50	14,970 17	5,526 00	2,168,557 67	2,060,535 10
Sixth district.....	14,646 82	38 76	14,608 06	375 83	137 01	.....	14 00	15,163 46	5,192 15	1,894,489 63	1,757,777 60
Seventh district.....	13,305 07	30 89	13,264 18	375 54	353 90	.....	31 50	14,056 01	6,397 90	1,392,307 83	1,242,806 83

[illegible]

**Complete returns not received from collector.**

\* Including items bought to provide previous fiscal years not before adjusted.

Statement showing the expenses of collecting the internal revenue taxes, &amp;c.—Continued.

District.	Gross com- pensation.	Tax.	Net compen- sation.	Stationery and blank books.	Postage.	Express and dep. money.	Adverti- sing.	Total expense of collecting.	Expenses of administering office.	Assessments.	Collections.
<b>MICHIGAN.</b>											
First district*	\$12,978 55	\$81 34	\$12,897 21	\$281 89	\$255 03	.....	\$50 20	\$13,205 67	\$4,127 80	\$2,024,552 23	\$2,110,545 28
Second district*	4,519 57	7 61	4,511 96	46 55	149 50	\$1 00	15 00	5,071 02	9,801 50	180,225 18	130,228 38
Third district*	4,716 90	7 51	4,709 39	65 33	178 64	.....	15 00	4,986 61	9,763 27	106,226 93	191,679 83
Fourth district*	5,133 12	33 30	5,119 92	51 00	121 00	9 45	74 60	5,401 57	9,406 14	112,157 19	115,568 68
Fifth district*	4,370 53	9 11	4,368 42	50 80	154 87	31 50	84 10	4,635 80	9,879 05	56,873 94	107,033 00
Sixth district*	6,345 42	10 42	6,335 00	108 57	150 12	1 00	80 70	6,624 81	9,508 25	211,226 12	202,300 41
Total.....	38,023 90	142 19	38,481 80	544 14	1,009 20	35 95	222 80	40,446 08	17,636 01	2,695,291 59	2,847,455 52
<b>MINNESOTA.</b>											
First district*	7,847 67	37 96	7,809 71	317 05	305 40	68 50	50 50	8,568 21	5,308 12	94,924 92	87,370 58
Second district*	5,292 60	11 02	5,191 58	169 64	303 37	.....	21 50	5,697 11	4,517 49	211,510 42	173,331 28
Total.....	13,050 27	48 98	13,001 29	486 69	608 76	68 50	51 00	14,265 32	9,825 61	306,441 34	260,701 84
<b>MISSISSIPPI.</b>											
First district.....	6,730 26	.....	6,730 26	145 76	30 90	37 54	39 00	6,963 46	4,884 50	31,855 02	55,350 55
Second district*	12,993 84	.....	12,993 84	185 20	147 04	1 50	13 25	13,340 83	10,882 88	104,985 57	131,000 44
Third district.....	5,744 95	.....	5,744 95	121 66	40 92	.....	.....	5,907 53	5,6 07	54,587 46	39,785 70
Total.....	25,469 05	.....	25,469 05	452 62	218 86	39 04	52 25	26,231 82	16,273 45	191,428 05	228,136 69
<b>MISSOURI.</b>											
First district*	26,300 63	17 22	26,283 40	669 91	276 04	.....	31 90	27,261 47	21,180 91	6,497,643 32	5,378,373 62
Second district*	8,425 00	22 00	8,412 70	87 30	326 51	86 87	124 40	9,140 68	6,174 59	113,715 80	84,025 61
Third district*	6,024 08	10 78	6,004 30	52 93	201 00	.....	67 00	6,345 01	1,377 60	250,647 70	252,409 56
Fourth district*	6,060 27	15 68	6,044 59	86 14	163 50	.....	101 88	6,423 79	1,342 00	329,903 43	228,394 70
Fifth district*	5,383 98	44 70	5,339 28	146 04	155 69	124 12	3 00	5,812 82	3,860 73	85,546 19	108,312 08
Sixth district*	22,227 86	77 11	22,150 75	381 63	502 01	19 00	158 85	23,289 45	8,781 46	1,150,672 73	531,110 45
Total.....	74,035 51	197 45	74,238 06	1,445 95	1,094 75	220 90	467 03	78,293 22	42,710 69	8,477,129 16	6,606,625 11
<b>MONTANA.</b>											
Montana*.....	17,058 20	74 05	17,884 34	181 25	126 40	220 67	31 01	18,517 71	12,290 70	115,555 63	107,973 59
<b>NEBRASKA.</b>											
Nebraska.....	10,514 60	.....	10,514 60	84 74	68 06	.....	25 00	10,691 30	5,456 35	311,773 33	210,292 02

NEW YORK									
Novels*	6,435 00	63 14	6,341 85	828 98	33 70	172 07	7,488 18	6,978 94	81,397 98
NEW HAMPSHIRE									
First district	5,131 64	14 00	5,188 85	56 00	131 88	10 00	5,329 99	1,123 00	135,038 64
Second district	5,373 34	18 00	5,337 67	11 00	109 44	37 00	5,567 11	1,439 71	142,867 51
Third district	5,044 63	13 30	5,021 10	57 68	186 56	46 75	5,300 41	313 00	50,527 90
Total	15,549 61	45 34	15,647 62	124 67	419 88	93 75	16,176 52	2,869 70	286,432 07
NEW JERSEY									
First district	4,494 20	19 50	4,451 64	55 97	56 10	...	5,008 10	2,837 02	117,137 43
Second district	7,023 51	39 11	7,004 53	70 70	321 91	...	7,397 36	2,492 14	414,150 63
Third district	6,070 75	30 72	6,070 08	253 51	371 17	...	6,761 36	3,048 73	710,322 07
Fourth district	10,717 61	13 00	10,707 04	553 48	154 50	77 50	11,594 12	2,550 17	344,479 00
Fifth district	10,717 61	7 04	10,710 57	76 30	136 00	44 00	10,976 91	7,453 00	3,507,320 51
Total	38,036 68	10 06	37,953 34	761 98	147 91	77 50	39,913 85	17,082 58	3,319,343 61
NEW MEXICO									
New Mexico	5,970 57	6 32	5,964 25	976 95	57 45	...	6,417 77	3,053 90	28,507 07
NEW YORK									
First district, (old)	6,079 03	37 64	6,061 35	5 50	153 36	10 00	6,318 41	1,590 00	135,518 14
First district, (new)	12,663 25	74 90	12,683 85	214 61	146 00	105 50	13,130 95	6,461 50	2,317,400 58
Second district, (old)*	10,508 61	74 90	10,431 62	61 78	70 00	105 50	10,647 30	5,311 11	1,344,096 84
Second district, (new)	9,117 67	80 50	9,117 67	410 09	69 60	151 00	9,746 66	7,437 07	1,539,701 08
Third district, (old)*	15,948 31	80 50	15,915 78	501 50	199 60	79 00	16,400 54	13,737 07	673,549 38
Third district, (new)	3,934 65	10 45	3,844 76	95 67	136 00	53 00	4,127 12	1,774 49	650,310 58
Fourth district	14,601 65	10 45	14,584 76	50 95	380 50	55 00	15,021 38	14,004 11	2,030,422 71
Fifth district	6,497 07	38 41	6,486 66	49 37	94 10	...	7,036 14	3,479 02	603,594 50
Sixth district	11,377 36	18 45	11,398 59	100 66	325 20	...	11,703 28	7,057 02	1,651,041 49
Seventh district*	7,169 09	32 40	7,198 99	37 08	47 80	40 40	7,324 16	3,574 00	744,536 00
Eighth district*	15,129 75	18 85	15,112 80	919 41	983 40	146 05	15,801 61	10,004 85	4,494,484 36
Ninth district	11,331 78	41 54	11,340 94	93 62	154 00	66 00	11,687 60	5,190 08	1,994,103 46
Tenth district	9,329 64	36 62	9,303 18	94 01	949 42	75 95	9,749 09	4,076 08	4,380,533 75
Eleventh district	6,401 01	37 67	6,415 32	100 67	149 36	35 00	7,000 52	3,404 45	100,131 00
Twelfth district	5,934 00	11 92	5,912 04	329 54	109 02	15 00	6,460 10	2,494 50	920,143 92
Thirteenth district	10,614 37	43 74	10,550 59	262 54	255 62	104 00	11,150 90	3,043 90	1,055,463 11
Fourteenth district	7,375 10	24 70	7,350 43	71 55	903 10	73 25	7,622 00	2,500 90	910,037 57
Fifteenth district*	3,131 95	4 67	3,131 26	34 09	146 04	12 75	3,253 73	1,069 50	54,304 56
Sixteenth district	4,945 94	6 60	4,939 30	30 01	91 46	29 50	5,104 91	1,794 35	41,521 00
Seventeenth district	2,945 50	0 04	2,943 80	85 94	924 70	...	3,134 90	3,467 90	110,618 51
Nineteenth district	4,513 41	10 08	4,503 33	68 45	95 30	90 00	4,777 16	2,131 67	55,029 33

\* Including items which belong to previous fiscal years, not before adjusted.

† Complete returns not received from collector.

Statement showing the expenses of collecting the internal revenue taxes, &c.—Continued.

District.	Gross compensation.	Tax.	Net compensation.	Stationery and blank-books.	Postage.	Express and dep. money.	Advertising.	Total expense of collecting.	Expenses of administering office.	Assessments.	Collections.
<b>NEW YORK—Cont'd.</b>											
Twentieth district.....	\$4,693 25	\$7 31	\$4,686 04	\$24 86	\$160 73	.....	\$37 25	\$4,916 09	\$1,575 73	\$118,138 88	\$119,355 03
Twenty-first district.....	7,610 54	25 10	7,704 44	150 35	122 12	.....	18 50	8,110 41	1,136 56	419,559 41	448,890 77
Twenty-second district.....	10,133 03	39 27	10,093 76	73 47	979 23	\$11 27	43 00	10,540 00	1,476 08	854,478 36	688,897 44
Twenty-third district.....	8,078 19	21 72	8,056 47	91 35	130 00	.....	51 00	8,350 54	3,034 43	370,640 02	439,210 93
Twenty-fourth district.....	8,132 67	20 68	8,111 99	83 12	957 14	.....	38 00	8,511 68	1,537 36	690,623 75	430,488 73
Twenty-fifth district.....	4,457 53	7 25	4,449 98	32 59	175 15	.....	50 50	4,685 77	2,688 59	130,058 09	115,696 06
Twenty-sixth district.....	5,370 55	8 35	5,371 50	37 39	63 04	.....	30 50	5,520 23	2,690 79	210,170 49	190,217 71
Twenty-seventh district.....	6,332 18	57 50	6,374 68	25 54	160 28	.....	21 62	6,539 63	2,364 11	184,042 06	164,341 50
Twenty-eighth district.....	9,310 10	40 21	9,269 89	43 85	177 35	.....	33 35	9,566 55	3,861 86	533,977 25	683,905 11
Twenty-ninth district.....	4,284 37	13 25	4,271 02	98 25	115 48	.....	41 00	4,529 01	1,833 15	104,373 80	53,998 51
Thirtieth district.....	13,196 03	34 49	13,161 54	200 41	819 47	.....	30 00	13,705 91	4,942 50	1,612,873 18	1,737,076 08
Thirty-first district.....	7,908 64	173 77	7,734 87	151 50	366 09	28 12	11 58	8,465 93	4,775 69	71,313 06	80,229 27
Thirty-second district.....	32,654 70	37 91	32,616 79	680 40	766 90	.....	14 40	34,126 40	25,154 70	4,490,298 63	4,484,148 31
Total.....	311,905 70	968 03	310,937 67	4,857 37	6,554 04	903 53	1,653 32	325,174 16	161,218 79	30,987,299 62	28,970,879 38
<b>NORTH CAROLINA.</b>											
First district.....	6,617 52	.....	6,617 52	48 21	138 28	.....	18 00	6,821 95	2,970 28	20,073 37	56,899 89
Second district.....	6,500 00	6 32	6,493 68	62 47	192 96	.....	37 50	6,812 93	3,613 00	101,964 80	86,533 49
Third district.....	10,377 52	4 21	10,373 31	10 25	24 50	48 79	10 00	10,471 06	5,324 35	73,584 92	36,732 37
Fourth district.....	15,400 75	39 49	15,361 26	216 56	137 03	.....	106 00	15,861 24	10,843 30	414,001 97	407,705 35
Fifth district.....	10,372 00	.....	10,372 00	60 44	145 13	.....	34 00	10,611 57	7,372 00	630,473 54	637,354 36
Sixth district.....	8,504 37	12 69	8,491 58	62 50	82 50	.....	40 75	8,699 83	5,830 00	246,953 20	225,229 27
Seventh district.....	4,753 13	10 22	4,692 90	69 52	39 25	.....	.....	4,811 89	3,373 66	35,973 60	28,068 35
Total.....	62,475 18	72 93	62,402 25	549 76	700 49	48 79	246 25	64,080 49	38,646 59	1,553,626 40	1,463,726 63
<b>OHIO.</b>											
First district (old).....	8,685 88	16 11	8,669 78	128 90	60 00	.....	.....	8,874 88	5,150 04	1,476,094 77	1,411,285 14
First district (new).....	5,392 13	.....	5,392 13	20 80	86 00	.....	.....	5,510 93	2,904 49	2,065,963 88	1,521,173 59
Second district.....	23,107 61	338 01	23,620 60	140 95	34 00	.....	12 00	24,150 56	7,272 63	3,282,281 61	3,051,867 81
Third district.....	16,147 75	42 30	16,105 45	109 03	265 25	.....	.....	16,637 73	5,979 00	2,744,549 94	2,394,113 06
Fourth district.....	10,231 48	31 37	10,200 11	47 28	61 15	.....	23 70	10,363 96	9,998 00	835,310 03	780,851 02
Fifth district.....	6,275 76	10 63	6,265 15	74 31	74 31	.....	34 05	6,463 90	1,971 25	314,643 54	240,110 85
Sixth district.....	11,311 49	39 87	11,271 62	137 03	157 20	.....	29 50	11,618 98	4,536 07	627,448 76	751,110 31
Seventh district.....	10,068 87	23 50	9,985 29	164 15	69 06	.....	16 75	10,350 83	4,538 70	793,009 24	705,435 96
Eighth district.....	2,728 68	4 50	2,724 18	105 20	33 28	.....	13 75	2,869 91	1,054 01	49,851 15	41,609 19
Ninth district.....	6,403 05	29 30	6,774 65	33 89	20 48	.....	59 75	6,911 07	2,737 50	611,868 75	633,498 54

Twelfth district	11,177 00	11,115 01	179 00	100 00	20 00	11,511 15	2,004 00	1,128 131 10	1,100 00	1,010 00	1,010 00	1,010 00
Seventeenth district	8,277 15	8,211 70	126 00	70 00	27 20	8,537 97	8,010 00	311,146 00	311,146 00	311,146 00	311,146 00	311,146 00
Eighteenth district	6,100 00	6,000 13	99 87	63 00	97 00	6,160 13	6,160 13	277,433 00	277,433 00	277,433 00	277,433 00	277,433 00
Nineteenth district	4,371 01	4,300 04	70 97	43 00	34 00	4,385 26	4,385 26	67,519 00	67,519 00	67,519 00	67,519 00	67,519 00
Twentieth district	4,371 01	4,300 04	70 97	43 00	34 00	4,385 26	4,385 26	67,519 00	67,519 00	67,519 00	67,519 00	67,519 00
Twenty-first district	4,074 01	4,000 00	74 01	43 00	34 00	4,077 01	4,077 01	82,000 00	82,000 00	82,000 00	82,000 00	82,000 00
Twenty-second district	10,075 00	10,000 00	75 00	43 00	34 00	10,075 00	10,075 00	1,075 00	1,075 00	1,075 00	1,075 00	1,075 00
Twenty-third district	4,043 00	4,000 00	43 00	10 00	20 00	4,043 00	4,043 00	1,075 00	1,075 00	1,075 00	1,075 00	1,075 00
Twenty-fourth district	9,204 72	9,200 00	4 72	00 00	00 00	9,204 72	9,204 72	1,075 00	1,075 00	1,075 00	1,075 00	1,075 00
Total	173,540 30	173,540 30	703 93	3,073 93	603 85	187,561 87	187,561 87	74,700 04	74,700 04	74,700 04	74,700 04	74,700 04
OREGON.												
Oregon	8,180 01	8,000 33	54 71	31 97	56 40	8,263 10	8,263 10	110,000 40	110,000 40	110,000 40	110,000 40	110,000 40
PENNSYLVANIA.												
First district, (old)	9,220 00	9,216 14	135 86	135 86	91 00	9,352 00	9,352 00	2,100 17	2,100 17	2,100 17	2,100 17	2,100 17
First district, (new)	11,497 57	11,474 57	23 00	103 00	72 40	11,597 57	11,597 57	3,000 00	3,000 00	3,000 00	3,000 00	3,000 00
Second district	8,723 01	8,740 30	117 29	103 00	14 00	8,857 59	8,857 59	2,100 17	2,100 17	2,100 17	2,100 17	2,100 17
Third district	13,977 07	13,945 03	32 04	300 00	53 00	14,272 07	14,272 07	3,000 00	3,000 00	3,000 00	3,000 00	3,000 00
Fourth district	12,300 00	12,300 00	00 00	100 00	13 75	12,403 75	12,403 75	3,000 00	3,000 00	3,000 00	3,000 00	3,000 00
Fifth district	7,747 75	7,754 04	66 29	101 21	10 50	7,853 99	7,853 99	2,100 17	2,100 17	2,100 17	2,100 17	2,100 17
Sixth district	4,406 49	4,400 00	66 49	144 00	10 50	4,550 49	4,550 49	1,000 00	1,000 00	1,000 00	1,000 00	1,000 00
Seventh district	6,124 00	6,100 00	24 00	134 00	14 00	6,238 00	6,238 00	1,000 00	1,000 00	1,000 00	1,000 00	1,000 00
Eighth district	7,715 04	7,740 30	25 26	114 98	14 00	7,859 26	7,859 26	2,100 17	2,100 17	2,100 17	2,100 17	2,100 17
Ninth district	5,000 00	5,000 00	00 00	300 00	10 50	5,300 50	5,300 50	1,000 00	1,000 00	1,000 00	1,000 00	1,000 00
Tenth district	5,000 00	5,000 00	00 00	300 00	10 50	5,300 50	5,300 50	1,000 00	1,000 00	1,000 00	1,000 00	1,000 00
Eleventh district	4,000 00	4,000 00	00 00	300 00	10 50	4,300 50	4,300 50	1,000 00	1,000 00	1,000 00	1,000 00	1,000 00
Twelfth district	4,000 00	4,000 00	00 00	300 00	10 50	4,300 50	4,300 50	1,000 00	1,000 00	1,000 00	1,000 00	1,000 00
Thirteenth district	4,000 00	4,000 00	00 00	300 00	10 50	4,300 50	4,300 50	1,000 00	1,000 00	1,000 00	1,000 00	1,000 00
Fourteenth district	4,000 00	4,000 00	00 00	300 00	10 50	4,300 50	4,300 50	1,000 00	1,000 00	1,000 00	1,000 00	1,000 00
Fifteenth district	4,000 00	4,000 00	00 00	300 00	10 50	4,300 50	4,300 50	1,000 00	1,000 00	1,000 00	1,000 00	1,000 00
Sixteenth district	4,000 00	4,000 00	00 00	300 00	10 50	4,300 50	4,300 50	1,000 00	1,000 00	1,000 00	1,000 00	1,000 00
Seventeenth district	4,000 00	4,000 00	00 00	300 00	10 50	4,300 50	4,300 50	1,000 00	1,000 00	1,000 00	1,000 00	1,000 00
Eighteenth district	4,000 00	4,000 00	00 00	300 00	10 50	4,300 50	4,300 50	1,000 00	1,000 00	1,000 00	1,000 00	1,000 00
Nineteenth district	4,000 00	4,000 00	00 00	300 00	10 50	4,300 50	4,300 50	1,000 00	1,000 00	1,000 00	1,000 00	1,000 00
Twentieth district	4,000 00	4,000 00	00 00	300 00	10 50	4,300 50	4,300 50	1,000 00	1,000 00	1,000 00	1,000 00	1,000 00
Twenty-first district	4,000 00	4,000 00	00 00	300 00	10 50	4,300 50	4,300 50	1,000 00	1,000 00	1,000 00	1,000 00	1,000 00
Twenty-second district	4,000 00	4,000 00	00 00	300 00	10 50	4,300 50	4,300 50	1,000 00	1,000 00	1,000 00	1,000 00	1,000 00
Twenty-third district	4,000 00	4,000 00	00 00	300 00	10 50	4,300 50	4,300 50	1,000 00	1,000 00	1,000 00	1,000 00	1,000 00
Twenty-fourth district	4,000 00	4,000 00	00 00	300 00	10 50	4,300 50	4,300 50	1,000 00	1,000 00	1,000 00	1,000 00	1,000 00
Total	190,705 01	180,755 40	2,356 65	3,073 93	603 85	197,561 87	197,561 87	74,700 04	74,700 04	74,700 04	74,700 04	74,700 04

\* Including items which belong to previous fiscal years not before adjusted.

Statement showing the expenses of collecting the internal revenue taxes, &c.—Continued.

District.	Gross compensation.	Tax.	Net compensation.	Stationery and blank books.	Postage.	Express and dep. money.	Advertising.	Total expense of collecting.	Expenses of administering office.	Assessments.	Collections.
<b>RHODE ISLAND.</b>											
First district.	\$8,510 03	\$20 19	\$8,489 89	\$24 69	\$153 17	\$26 48	\$40 25	\$8,764 67	\$3,539 61	\$596,124 96	\$600,893 39
Second district.	3,700 32	11 72	3,688 60	36 36	43 50	.....	24 50	3,814 90	1,049 17	75,891 50	73,636 56
Total.	12,210 40	31 91	12,178 49	71 27	196 67	26 48	64 75	12,569 57	4,588 78	672,016 46	674,439 95
<b>SOUTH CAROLINA.</b>											
First district.	13,032 77	40 61	12,992 16	180 36	155 95	.....	53 75	13,422 75	6,669 95	35,417 52	49,023 26
Second district.	4,003 37	18 85	4,384 42	58 23	82 75	.....	122 03	4,866 89	2,803 66	106,904 52	115,041 90
Third district.	5,437 69	.....	5,437 69	95 83	80 26	50	83 00	5,697 28	4,544 00	364,723 46	108,753 72
Total.	23,073 73	59 46	23,014 27	334 93	318 96	50	258 80	23,986 92	14,017 61	507,045 50	572,836 88
<b>TENNESSEE.</b>											
First district.	8,099 35	33 43	8,065 92	49 00	92 50	.....	22 50	8,663 35	4,844 56	83,379 30	63,159 67
Second district.	6,458 23	2 08	6,456 20	37 57	50 00	.....	.....	6,545 85	4,810 25	85,235 88	53,819 12
Third district.	7,731 97	4 21	7,727 76	79 71	50 17	.....	5 50	7,867 43	3,920 00	77,453 48	54,463 48
Fourth district.	4,390 41	.....	4,390 41	70 04	45 00	.....	.....	4,437 95	2,787 94	66,038 81	61,730 15
Fifth district.	7,745 43	8 42	7,737 01	132 06	167 00	.....	17 75	8,062 26	4,745 43	361,243 59	331,521 62
Sixth district.	3,150 15	28 89	3,121 26	2 25	3 48	.....	.....	3,125 98	332 97	140,651 05	74,567 55
Seventh district.	7,141 94	53 79	7,088 15	25 02	58 50	.....	25 75	7,251 21	2,433 34	96,710 49	100,847 16
Eighth district.	7,221 26	11 94	7,209 32	94 57	138 08	.....	15 70	7,469 61	4,221 26	219,015 30	214,212 64
Total.	52,468 79	142 76	52,326 03	490 24	604 73	.....	109 70	53,673 46	23,086 35	1,132,719 90	959,311 39
<b>TEXAS.</b>											
First district.	8,280 71	285 70	7,995 01	.....	25 30	.....	3 00	8,290 71	.....	130,879 32	118,295 90
Second district.	7,814 17	84 88	7,729 29	16 21	25 30	.....	.....	7,858 68	5,256 20	20,763 14	27,920 56
Third district.	9,436 60	52 37	9,384 23	108 88	52 85	946 36	36 50	10,881 19	6,415 63	59,723 51	106,000 00
Fourth district.	25,466 99	464 78	25,002 21	5 00	332 50	.....	150 05	26,506 89	11,599 54	133,107 29	134,670 66
Total.	50,998 47	887 73	50,110 74	130 09	430 35	1,479 01	189 55	53,227 47	22,971 42	354,073 26	386,867 12
<b>UTAH TERRITORY.</b>											
Utah Territory.	26,351 09	174 88	26,176 21	263 80	900 00	222 40	.....	27,227 29	4,001 50	36,062 47	69,877 65
<b>VERMONT.</b>											
First district.	4,014 80	30 74	4,014 02	45 92	125 00	.....	.....	4,215 73	.....	77,641 66	114,480 09



# REPORT OF THE SECRETARY OF THE TREASURY.

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Second district	5,903 40	10 77	3,977 08	7 30	100 44	4 40	4,100 41	1,302 06	70,727 77	495 79	11
Third district	5,897 44	10 87	3,975 17		98 40	40 24	4,100 30	1,304 35	74,670 44	495 79	22
Total	11,800 84	21 64	7,952 25	7 30	198 84	80 64	8,200 71	2,606 41	145,398 21	991 158	33
VIRGINIA.											
First district	4,803 07	31 04	4,803 03	58 78	64 04	4 00	5,013 03	5,945 09	31,809 34	57,077 33	
Second district	0,737 64	10 04	0,730 06	171 81	09 03	10 05	10,019 05	5,305 04	801,930 82	71,552 40	
Third district	13,353 87	10 51	12,307 30	920 65	104 84	97 01	12,405 30	5,430 01	611,004 04	8,451,723 78	
Fourth district	4,923 94	8 39	4,923 94	117 49	65 00	33 50	4,400 31	5,130 70	97,075 70	71,303 04	
Fifth district	13,004 30	104 52	13,407 83	926 21	928 81	35 00	11,004 37	5,112 41	1,491,700 10	1,620,532 70	
Sixth district	0,607 06	0 43	0,500 63	311 85	353 13	35 00	7,067 03	4,179 43	147,837 50	144,702 11	
Seventh district	4,713 03	9 09	4,711 84	315 04	135 05	1 40	5,022 52	1,019 05	97,810 40	110,570 37	
Eighth district	9,030 70	15 87	9,023 40	49 18	140 50	90 25	3,148 00	1,478 70	30,410 83	47,008 24	
Total	50,073 09	306 34	48,407 24	1,353 01	1,100 05	105 40	61,725 14	29,717 06	5,734,642 03	5,311,145 97	
WASHINGTON TERRITORY.											
Washington Territory	7,031 90		7,031 90	940 70	71 31	05 00	8,007 80	5,112 83	92,030 05	32,898 25	
WEST VIRGINIA.											
First district	6,707 71	31 09	6,775 70	14 75	106 00	40 50	6,067 06	1,050 00	352,110 77	350,086 94	
Second district	6,001 11	30 04	6,030 07	3 00	101 50	30 50	6,140 17	1,000 00	105,070 03	140,552 94	
Third district	9,030 47	8 06	9,018 41	133 21	71 88	81 75	9,013 50	1,700 87	40,103 60	37,366 61	
Total	11,739 29	69 19	11,824 18	310 96	279 43	151 75	16,067 43	4,040 87	500,353 40	594,006 49	
WISCONSIN.											
First district	10,130 43	31 51	10,100 00	100 10	135 01	44 05	12,411 50	4,943 34	1,439,615 81	1,435,143 19	
Second district	4,893 04	17 14	4,890 80	60 07	180 25	84 50	5,023 36	1,820 50	110,037 05	131,723 37	
Third district	3,417 04	9 11	3,414 07	98 55	119 21	30 65	3,507 30	2,418 54	40,375 55	63,062 83	
Fourth district	4,339 08	17 77	4,314 31	97 06	141 00	90 50	4,590 64	1,600 00	80,483 06	95,802 16	
Fifth district	10,120 95	50 11	10,078 84	31 85	97 00	15 50	10,304 30	3,101 81	97,870 86	108,220 60	
Sixth district	10,170 08	70 40	10,067 07	25 90	119 30	40 63	10,355 78	5,230 51	134,580 98	141,408 11	
Total	45,073 44	300 53	44,472 91	270 83	780 15	285 83	46,377 05	17,309 70	1,800,373 41	1,906,619 86	
WYOMING TERRITORY.											
Wyoming Territory	9,000 80	11 49	9,003 47	83 70	15 00	98 25	3,072 65	980 50	9,000 41	14,563 12	

NOTE.—The districts marked "old" and "new" are those that have been consolidated, and show the amount of expenses previous and subsequent to consolidation.  
 \* Including items which belong to previous fiscal years not before adjusted.  
 † Complete returns not received from collector.



Vermont	14, 000 00	24 00	14, 000 00	1, 100 00	1 00	91 75	11, 100 00	1, 000 00	820, 000 00	1, 000 00	1, 000 00	1, 000 00
Virginia	10, 000 00	24 00	10, 000 00	1, 100 00	1 00	91 75	11, 100 00	1, 000 00	820, 000 00	1, 000 00	1, 000 00	1, 000 00
Washington Territory	10, 000 00	24 00	10, 000 00	1, 100 00	1 00	91 75	11, 100 00	1, 000 00	820, 000 00	1, 000 00	1, 000 00	1, 000 00
West Virginia	10, 000 00	24 00	10, 000 00	1, 100 00	1 00	91 75	11, 100 00	1, 000 00	820, 000 00	1, 000 00	1, 000 00	1, 000 00
Wisconsin	10, 000 00	24 00	10, 000 00	1, 100 00	1 00	91 75	11, 100 00	1, 000 00	820, 000 00	1, 000 00	1, 000 00	1, 000 00
Wyoming Territory	10, 000 00	24 00	10, 000 00	1, 100 00	1 00	91 75	11, 100 00	1, 000 00	820, 000 00	1, 000 00	1, 000 00	1, 000 00
Grand total	10, 000 00	24 00	10, 000 00	1, 100 00	1 00	91 75	11, 100 00	1, 000 00	820, 000 00	1, 000 00	1, 000 00	1, 000 00

## REPORT OF THE SIXTH AUDITOR OF THE TREASURY.

OFFICE OF THE AUDITOR OF THE TREASURY  
FOR THE POST-OFFICE DEPARTMENT,  
October 13, 1871.

SIR: I have the honor to submit the following report of the business operations of this office for the fiscal year ending June 30, 1871. My forthcoming report to the Postmaster General will exhibit in detail all that pertains to the financial transactions of the Post-Office Department for the past fiscal year.

The work performed by the clerical force of this office can be most clearly and satisfactorily shown by divisions, and I have therefore caused each chief of division to carefully prepare a synopsis of the work performed quarterly, so far as practicable, with a view to exhibit the steady increase of the business of this Bureau, an increase which must continue with the growth of the country, and the consequent extension of mail facilities.

## EXAMINING DIVISION.—DR. BENJAMIN LIPPINCOTT, PRINCIPAL CLERK.

This division receives and audits the quarterly accounts current of all post-offices in the United States. It is divided into four subdivisions, viz: the opening-room, the stamp-rooms, the examining corps proper, and the error-rooms.

1. *The opening-room.*—All returns as soon as received are opened, and, if found in order according to regulations, are entered on the register, carefully folded and tied, and then forwarded to the stamp-rooms.

The number of quarterly accounts current received each quarter of the fiscal year ending June 30, 1871, was as follows:

Third quarter, 1870.....	27, 738
Fourth quarter, 1870.....	28, 092
First quarter, 1871.....	28, 111
Second quarter, 1871.....	28, 615
Total.....	<u>112, 556</u>

2. *The stamp-rooms.*—The quarterly returns received from the opening-room are divided alphabetically among eight stamp clerks, whose duties consist in comparing the stamp statements of the postmasters in the accounts current with their own books, and the returns made to them from the stamp division of the finance office, whence stamp orders are issued and receipts for the same received and forwarded to the stamp clerks. The returns thus approved or corrected are passed to the examiners. All accounts from offices of the first and second class are passed through the various subdivisions of the office in advance of other returns, so that they may reach the chief examiner and his assistant with as little delay as possible.

The number of accounts examined and settled by the stamp clerks for each quarter of the fiscal year ending June 30, 1871, was as follows:

Third quarter, 1870.....	27, 356
Fourth quarter, 1870.....	27, 835
First quarter, 1871.....	27, 756
Second quarter, 1871.....	28, 378
Total.....	<u>111, 325</u>

3. The examining corps proper is composed of 17 clerks, among whom the returns received from the stamp-rooms are divided by sections, each comprising several States or parts of States. The average number to each section is about 1,700. After the examination of the accounts current and the stamp account, reviewing and refooting the transcript of mails received, and examining all vouchers belonging to that portion of the work, the balance is drawn on all accounts of the 3d, 4th, and 5th classes. The returns thus examined and completed are forwarded to the registering division, to be entered upon its books.

The number of accounts examined and sent to the registering division for the fiscal year ending June 30, 1871, was as follows:

Third quarter, 1870.....	27,356
Fourth quarter, 1870.....	27,835
First quarter, 1871.....	27,756
Second quarter, 1871.....	28,378
<b>Total .....</b>	<b>111,325</b>

4. The error-rooms contain 6 clerks, who review and re-examine the error accounts received from the registering division, and forward to each postmaster a copy of his account, as stated by him, and as audited and corrected in this office.

The number of accounts so corrected and copied for the fiscal year ending June 30, 1871, was as follows:

Third quarter, 1870.....	6,308
Fourth quarter, 1870.....	7,736
First quarter, 1871.....	10,116
Second quarter, 1871.....	7,166
<b>Total .....</b>	<b>31,326</b>

Each subdivision reports weekly to the chief examiner, and monthly through that officer to the chief clerk, the progress of the work, so that the exact amount of work done by each clerk is clearly ascertained.

All vouchers relative to allowances made by the Post-Office Department for clerk hire, lights, fuel, rent, stationery, &c., at post offices of the 1st and 2d classes, are forwarded at the beginning of each quarter to the chief examiner and his assistant for examination. A statement is then prepared showing the vouchers received, the amount allowed, and the amount suspended when found to be in excess of the allowance. On receipt of the returns from the examiners these accounts are reviewed, and the amount allowable added, and the balance drawn by the chief examiner.

The number of post-offices of the 1st and 2d classes which have received allowances for clerk hire, rent, &c., was 335.

The number of offices of the 2d class having an allowance for clerk hire only was 159.

The number of offices having an allowance for clerk hire to assist in separating the mails (independent of the number above named) was 348.

Total number of offices of all classes receiving allowances, and approved by the chief examiner, was 842.

The expense accounts of the 335 offices of the 1st and 2d classes were regularly entered by the chief examiner and his assistant on the expense

register, and show quarterly the amount of vouchers received, amount allowed, and amount suspended, copies of which were forwarded to each postmaster.

Attached to the examining division is a corresponding clerk, whose duty consists in corresponding with postmasters relative to errors in their accounts current, and in making day-book entries, &c.

The amount involved in the settlement of the quarterly accounts current of postmasters during the fiscal year was as follows:

Third quarter, 1870 .....	\$4, 723, 683 99
Fourth quarter, 1870 .....	5, 013, 104 98
First quarter, 1871 .....	5, 300, 715 05
Second quarter, 1871 .....	5, 080, 948 59
Total .....	<u>20, 118, 452 61</u>

The labors of the examining division for the fiscal year ending June 30, 1871, have been fully completed. All accounts received in proper form have been examined and passed to the registering division. At no period has the work been more perfect in all its details. Not only has there been a decided improvement in the preparation of returns by postmasters, particularly those of the 1st and 2d classes, but by judicious changes in the office the efficiency of the examining corps has been greatly increased.

#### REGISTERING DIVISION—F. I. SEYBOLT, PRINCIPAL CLERK.

This division receives from the examining division the quarterly accounts current of postmasters, and re-examines and registers them in books prepared for that purpose, placing each item of revenue and expenditure under its appropriate head.

Upon this division 11 clerks are employed, and during the fiscal year the following number of accounts current was received, re-examined, and registered, viz:

Third quarter, 1870 .....	27, 342, involving	\$4, 723, 683 99
Fourth quarter, 1870 .....	27, 800, do.	5, 013, 104 98
First quarter, 1871 .....	27, 992, do.	5, 300, 715 05
Second quarter, 1871 .....	28, 412, do.	5, 080, 948 59
Total .....	111, 546, do.	<u>20, 118, 452 61</u>

During this fiscal year, 5,287 circulars were sent to postmasters who had failed to render their quarterly returns.

The number of changes of postmasters, establishment, re-establishment, discontinuance, and change of name of post-offices reported from the appointment office during the fiscal year and noted by the registers, was as follows:

Third quarter, 1870 .....	1, 814
Fourth quarter, 1870 .....	1, 907
First quarter, 1871 .....	2, 530
Second quarter, 1871 .....	2, 443
Total .....	<u>8, 694</u>

The work of this division is fully up to the requirements of the office, the quarterly accounts current received from every office having been registered to the 30th day of June, 1871, the footings and recapitulations made, and the books prepared for the registration of the accounts of the quarter closing September 30, 1871.

**BOOK-KEEPER'S DIVISION—JAMES F. MAGUIRE, ACTING PRINCIPAL CLERK.**

This division has in charge the ledger accounts of postmasters, late postmasters, contractors, and late contractors.

The work of this division is performed by 14 clerks, viz: One principal book-keeper, in charge of ledger of general accounts; one assistant principal in charge of ledger of warrants and deposits, cash-book, register of deposits, and all day-book entries on reports approved by the Auditor; and twelve book-keepers. The number of ledgers is 51, averaging over 575 pages each.

The number of auxiliary books posted every quarter is as follows: 11 registers of postmasters' returns, 35 pay books, 8 journals, 3 registers of Postmaster General's drafts, 1 register of warrants, 1 stamp-journal, 1 cash-book, 1 deposit-book, 1 Auditor's draft-book, 1 money-order transfer-cash, 6 mail-messenger's registers, 6 registers of special mail service, 1 route agent's book, 1 letter-carrier's book.

*Ledgers of postmasters' accounts.*

Sections.	Ledgers.	Current accounts.	Late accounts.
.....	4	3,475	789
.....	4	3,451	564
.....	4	3,567	677
.....	4	4,109	783
.....	5	3,782	693
.....	5	4,043	1,034
.....	5	3,732	920
.....	4	3,525	699
Total.....	35	29,689	6 159

*Ledgers of mail-contractors' accounts.*

Section.	No. of ledger.	Current accounts.	Day-book entries journalized.	Accounts journalized from transfer sheets.
.....	3	1,412	1,024	8,440
.....	3	1,630	1,418	8,828
.....	3	1,080	1,079	7,422
.....	3	1,153	1,735	7,841
Total.....	12	5,275	5,856	32,591

The work of this division is in excellent condition, and fully up to the regulations of the office. All postings required to be done during the fiscal year were completed in advance of the time allowed.

## STATING DIVISION—WM. H. GUNNISON, PRINCIPAL CLERK.

This division has charge of the general accounts of all the postmasters in the United States, each of which is stated and balanced quarterly.

The items of the accounts of postmasters at offices of the first, second, and third classes, (from which nineteen-twentieths of the revenue of the Post Office Department is derived,) and at draft and deposit offices of the fourth and fifth classes, are obtained from the earliest records made in the office, the accounts stated and balanced within the ninety days succeeding the quarter to which the items pertain, and are handed over to the collecting division "for copy."

The remaining accounts are stated as soon as the items can be taken from the ledgers of the book-keepers, and those which show debit balances are reported to the collecting division. During the past year, all accounts showing credit balances of \$10 or more to June 30, 1870, were also reported.

Accounts of late postmasters are stated during the fourth month after the quarter in which the change is reported to this office, and those showing debit balances of \$1, or more, are reported to the collecting division "for copy." They are again revised before the close of the sixth month, and those which then show such balances are handed to the collecting division "for draft." At the close of the eighth month, all, except those "suspended" for special reasons, are fully stated and transferred "finally" to the collecting division.

*Statement showing the number of the general accounts of present postmasters in charge of the stating division, for and during the fiscal year ending June 30, 1871, and the classification of their offices.*

States and Territories.	Draft offices.		Deposit offices.		Collection offices.		Special offices.	Total number in each State and Territory.	Total number in each section.
	First, second, and third classes.	Fourth and fifth classes.	First, second, and third classes.	Fourth and fifth classes.	First, second, and third classes.	Fourth and fifth classes.	Fourth and fifth classes.		
Maine .....	6	4	5	105	12	674	38	846	.....
New Hampshire .....	7		6	46	7	335	14	415	.....
Vermont .....	10	4	3	59	7	358	29	469	.....
Massachusetts .....	16	2	32	122	33	472	25	702	2,432
New York, A to S .....	31	4	31	271	63	1,644	260	.....	2,304
Pennsylvania, A to R .....	8	3	30	103	38	1,977	54	.....	2,309
Connecticut .....	9	1	12	82	14	252	32	402	.....
Rhode Island .....	2		3	10	5	76	5	101	.....
West Virginia .....	1		1	23	3	571	13	612	.....
Wisconsin .....	3	1	7	83	32	908	51	1,085	2,900
North Carolina .....	2			22	9	750	10	802	.....
South Carolina .....	1		3	10	5	334	5	358	.....
Georgia .....	2		2	40	14	436	10	504	.....
Alabama .....	3		3	36	5	523	12	582	2,246
California .....			5	29	12	480	43	569	.....
Minnesota .....	3		6	19	8	598	40	674	.....
Oregon .....				1	2	168	14	185	.....
Kansas .....	1		5	30	16	499	124	675	.....
Nebraska .....	1			4	5	234	50	294	.....
New Mexico .....					2	46	1	49	.....
Washington .....				2	2	91	5	100	.....



*Number of the general accounts of present postmasters, &c.—Continued.*

States and Territories.	Draft offices.		Deposit offices.		Collection offices.		Special offices.	Total number in each State and Territory.	Total number in each section.
	First, second, and third classes.	Fourth and fifth classes.	First, second, and third classes.	Fourth and fifth classes.	First, second, and third classes.	Fourth and fifth classes.	Fourth and fifth classes.		
Alabama				1	3	135	5	144	
Alaska				1	1	35	15	52	
Arizona	1			2	5	97	7	112	
Arkansas					2	31	2	35	
California					3	64	2	69	
Colorado			1	1	5	4	8	64	
Connecticut					3	51		24	
Delaware				4		24	2	26	
District of Columbia								4	3,075
Florida	15		8	162	64	1,697	87		2,033
Georgia	7		13	247	85	1,273	62	1,657	
Idaho	2		13	75	23	420	24	566	2,253
Illinois			1	7	5	211	4	228	
Indiana			3	33	31	1,184	116	1,367	
Iowa			8	163	3	641	60	878	2,473
Kansas				9	7	413	5	493	
Kentucky	3		9	72	10	768	63	925	
Louisiana	2			41	15	547	34	643	
Maine			1	11	4	479	23	518	2,589
Maryland	2		5	65	13	1,042	33	1,160	
Massachusetts	2	1	4	46	12	255	41	361	
Michigan	1		3	26	5	495	32	562	2,083
Minnesota	1		1	4	1	83	2	92	
Mississippi			1			3		4	
Missouri	10	4	9	192	52	1,033	61	1,361	
Montana	4		8	37	15	603	15	662	2,139
Nebraska	15	3	14	95	18	947	51	1,148	
Nevada	12	1	10	105	34	806	35	1,007	
New Hampshire	1		3	1	1	128	4	138	2,288
New Jersey									
New Mexico									
New York									
North Carolina									
North Dakota									
Ohio									
Oklahoma									
Oregon									
Pennsylvania									
Rhode Island									
South Carolina									
South Dakota									
Tennessee									
Texas									
Vermont									
Virginia									
Washington									
West Virginia									
Wisconsin									
Wyoming									
Total number of general accounts.									30,324

*Statement showing the number of changes, and the condition of the general accounts of late postmasters, for and during the fiscal year ending June 30, 1871.*

Number of changes, reported to this office weekly, during the fiscal year ending June 30, 1871.		Quarters prior to third quarter, 1870.	Third quarter, 1870.	Fourth quarter, 1870.	First quarter, 1871.	Second quarter, 1871.	Total.
Accounts	Discontinued		158	211	263	329	
	Miscellaneous		1,339	1,575	2,265	1,460	
	Established and re-established		549	403	461	999	
	Stated—Finally		1,496	1,724			
Accounts	Stated to latest dates audited				2,403	2,912	
	"Suspended," stated to latest dates audited	202	70	96			
Totals		202	3,612	4,009	5,395	6,100	19,318
Excess the number of changes classified as established and re-established, (2,412) and accounts suspended, (368.)							2,860
Leaving the number of accounts of late postmasters settled finally, for and during the fiscal year.							16,

*Miscellaneous.*

Number of credits, entries, &c.	Third quarter, 1870.	Fourth quarter, 1870.	First quarter, 1871.	Second quarter, 1871.	Total.
Credits authorized by Third Assistant Postmaster General, entered in stamp journal and general accounts.	859	545	526	549	2,479
Entries in stamp journal and general accounts, on orders from stamp clerks.	332	376	500	1,358	2,566
Entries in day-books.....	147	254	146	147	694
Letters written—correspondence in special cases.....	118	158	140	94	510
Circulars sent in answer to letters received—special cases.....	443	528	471	262	1,704
Reports of failures to pay indebtedness, render returns, and to qualify.	162	131	149	151	593

The foregoing description indicates partially the amount of work done by the clerks of this division. The general accounts of present and late postmasters, in charge of each of the thirteen sections thereof, are in a very satisfactory condition, and fully up to the requirements of the routine of business in this office.

## COLLECTING DIVISION—E. J. EVANS, PRINCIPAL CLERK.

The duties of the collecting division are to collect all balances due from late and present postmasters and contractors throughout the United States. The average number of clerks employed is about eighteen, whose business it is to issue drafts on late postmasters and contractors, and keep a register thereof, to report to the Post-Office Department for payment all balances due to late postmasters, and keep a record of the same, to record all changes reported by the appointment office of the Post-Office Department, to record the names of postmasters becoming "late" during the fiscal year in a book kept for that purpose, to record and file away all drafts paid, to correspond with postmasters and contractors with a view to the collection of balances due the United States, to record and transmit such correspondence, to copy all postmasters' and contractors' accounts, and inclose the same in their appropriate circulars, to submit for suit the accounts of defaulting postmasters and contractors, to receive, open, and dispose of all mails arriving at the office, to prepare matter for the Biennial Register, &c.

It is proper to state, in justice to some of the gentlemen employed in this division, that their business involves a thorough knowledge of the machinery of the entire office, and much of that of the Post-Office Department, with which it is intimately associated, and that it necessitates a constant watchfulness and careful scrutiny of the various books and files from which the accounts coming before them for adjustment are made up. This is especially true of the gentlemen employed in correspondence. The number of letters written, for example, cannot adequately convey to you the amount of labor performed by them, as, in some instances, hours of investigation are required, and day-book entries made, before an intelligible letter can be written in the case. Issuing drafts, reporting balances for payment, recording changes, also require and receive great care and close application on the part of the gentlemen intrusted with these duties.

I have the satisfaction to state that the work of the division is fully up to the requirements of the Department.

Accounts of postmasters and contractors.	No.	Amount.
Accounts of postmasters becoming late during the period from July 1, 1862, to June 30, 1870, in charge of division	17,010	
Accounts of postmasters becoming late during the fiscal year:		
Quarter ending September 30, 1870	1,544	\$110,763 48
Quarter ending December 31, 1870	1,811	141,342 13
Quarter ending March 31, 1871	2,508	126,019 18
Quarter ending June 30, 1871	2,205	131,829 98
Total	25,078	510,014 77
Accounts of contractors received from the pay division for collection, upon which drafts were issued:		
Quarter ending September 30, 1870	49	\$7,887 08
Quarter ending December 31, 1870	57	8,665 10
Quarter ending March 31, 1871	15	4,472 78
Quarter ending June 30, 1871	27	4,089 79
Total	148	25,094 75
Drafts issued on present and late postmasters during the fiscal year:		
Quarter ending September 30, 1870	843	\$110,215 90
Quarter ending December 31, 1870	1,168	120,784 50
Quarter ending March 31, 1871	1,076	141,916 63
Quarter ending June 30, 1871	939	162,532 36
Total	4,065	535,449 39
Accounts of postmasters becoming late during the fiscal year showing balances in their favor, and closed by "suspense":		
Quarter ending September 30, 1870	485	\$334 63
Quarter ending December 31, 1870	1,065	4,396 13
Quarter ending March 31, 1871	166	5,743 81
Quarter ending June 30, 1871	173	2,772 16
Total	1,889	13,236 73
Accounts of postmasters becoming late during the fiscal year showing balances due the United States, and closed by "suspense":		
Quarter ending September 30, 1870	435	\$195 64
Quarter ending December 31, 1870	148	63 96
Quarter ending March 31, 1871	12	121 45
Quarter ending June 30, 1871	1	4 84
Total	596	385 89
Accounts of postmasters becoming late during the fiscal year, showing balances due the United States, found uncollectable:		
Quarter ending September 30, 1870	92	\$20,695 15
Quarter ending December 31, 1870	1	10 20
Quarter ending March 31, 1871	12	3,621 24
Quarter ending June 30, 1871	21	1,216 82
Total	126	25,543 41
Accounts showing balances due late postmasters, and reported to the Post-Office Department for payment:		
Quarter ending September 30, 1870	161	\$19,833 00
Quarter ending December 31, 1870	213	13,627 60
Quarter ending March 31, 1871	1,639	64,072 76
Quarter ending June 30, 1871	562	27,177 29
Total	2,575	117,110 65
Accounts of late postmasters submitted for suit:		
Quarter ending September 30, 1870	25	\$20,565 94
Quarter ending December 31, 1870	30	13,850 82
Quarter ending March 31, 1871	30	15,999 36
Quarter ending June 30, 1871	17	6,114 60
Total	92	56,472 91
Letters received during the fiscal year:		
Quarter ending September 30, 1870		51,505
Quarter ending December 31, 1870		53,369
Quarter ending March 31, 1871		54,534
Quarter ending June 30, 1871		50,064
Total		223,472

## Letters sent during the fiscal year :

Quarter ending September 30, 1870.....	35,504
Quarter ending December 31, 1870.....	34,171
Quarter ending March 31, 1871.....	39,184
Quarter ending June 30, 1871.....	36,711
<b>Total</b> .....	<b>145,570</b>

## Letters recorded during the fiscal year :

Quarter ending September 30, 1870.....	1,618
Quarter ending December 31, 1870.....	1,355
Quarter ending March 31, 1871.....	2,517
Quarter ending June 30, 1871.....	2,252
<b>Total</b> .....	<b>7,742</b>

## Letters written to postmasters and others during the fiscal year :

Quarter ending September 30, 1870.....	1,086
Quarter ending December 31, 1870.....	1,315
Quarter ending March 31, 1871.....	1,683
Quarter ending June 30, 1871.....	1,642
<b>Total</b> .....	<b>5,726</b>

## Accounts copied during the fiscal year, and sent in their appropriate circulars :

Quarter ending September 30, 1870.....	4,668
Quarter ending December 31, 1870.....	10,996
Quarter ending March 31, 1871.....	11,033
Quarter ending June 30, 1871.....	4,674
<b>Total</b> .....	<b>31,271</b>

## Pages of post office "changes" reported by the Post Office Department during the fiscal year, recorded in the change books :

Quarter ending September 30, 1870.....	1,944
Quarter ending December 31, 1870.....	2,261
Quarter ending March 31, 1871.....	3,328
Quarter ending June 30, 1871.....	2,922
<b>Total</b> .....	<b>10,455</b>

## Pages of Blue Book or Biennial Register prepared for publication.....

1,596

## Pages of stamp journal added and recapitulated :

Quarter ending September 30, 1870.....	150
Quarter ending December 31, 1870.....	47
Quarter ending March 31, 1871.....	52
Quarter ending June 30, 1871.....	64
<b>Total</b> .....	<b>313</b>

## Pages of draft register recorded :

Quarter ending September 30, 1870.....	50
Quarter ending December 31, 1870.....	66
Quarter ending March 31, 1871.....	58
Quarter ending June 30, 1871.....	52
<b>Total</b> .....	<b>226</b>

## Pages of book of balances recorded :

Quarter ending September 30, 1870.....	146
Quarter ending December 31, 1870.....	152
Quarter ending March 31, 1871.....	202
Quarter ending June 30, 1871.....	180
<b>Total</b> .....	<b>680</b>

## Pages of letter-books recorded:

Quarter ending September 30, 1870.....	810
Quarter ending December 31, 1870 .....	889
Quarter ending March 31, 1871.....	1, 047
Quarter ending June 30, 1871 .....	1, 134
Total .....	<u>3, 880</u>

## LAW DIVISION.—J. BOZMAN KERR, PRINCIPAL CLERK.

To this division is assigned the duty of preparing and transmitting to the Department of Justice, for suit, accounts of late postmasters and contractors who fail to pay their indebtedness to the United States upon the drafts of the Department.

The number of accounts and accompanying papers prepared for suit during the fiscal year was as follows:

In the third quarter of 1870	25 cases, involving.....	\$20, 565 98
In the fourth quarter of 1870	20 cases, involving.....	13, 859 88
In the first quarter of 1871	30 cases, involving.....	15, 928 36
In the second quarter of 1871	17 cases, involving.....	6, 118 69
Total.....	92 cases, involving .....	<u>\$56, 472 91</u>

Number of judgments obtained during the fiscal year 1871,  
as reported by the Department of Justice, was..... 166  
Amount of collections, including interest... .. \$46, 204 30

All accounts received from the collecting division have been prepared for suit and transmitted to the Department of Justice.

## FOREIGN MAIL DIVISION.—ISAAC W. NICHOLLS, PRINCIPAL CLERK.

This division has charge of the postal accounts with foreign governments, and the accounts with steamship companies for ocean transportation of the mails.

## Number of accounts of each country settled during the fiscal year, and amounts involved.

Name of country.	Number of quarterly accounts.	Amount.
United Kingdom .....	Five .....	\$1, 301, 082 44
North German Union* .....	Two .....	431, 735 47
France† .....	.....	.....
Belgium .....	Three.....	12, 301 63
Netherlands .....	Five .....	30, 216 91
Switzerland .....	Five .....	60, 812 56
Italy .....	Five .....	38, 460 41
Total amount involved .....	.....	<u>1, 874, 618 22</u>

\* German accounts are registered and ready for settlement to date.

† France: expired by notification December 31, 1869. Three accounts remain unsettled; they are, however, registered and ready for settlement.

## Letters sent during the fiscal year :

Quarter ending September 30, 1870.....	35,504
Quarter ending December 31, 1870.....	34,171
Quarter ending March 31, 1871.....	39,184
Quarter ending June 30, 1871.....	36,711

Total ..... 145,570

## Letters recorded during the fiscal year :

Quarter ending September 30, 1870.....	1,618
Quarter ending December 31, 1870.....	1,355
Quarter ending March 31, 1871.....	2,517
Quarter ending June 30, 1871.....	2,232

Total ..... 7,742

## Letters written to postmasters and others during the fiscal year :

Quarter ending September 30, 1870.....	1,086
Quarter ending December 31, 1870.....	1,315
Quarter ending March 31, 1871.....	1,683
Quarter ending June 30, 1871.....	1,642

Total ..... 5,726

## Accounts copied during the fiscal year, and sent in their appropriate circulars :

Quarter ending September 30, 1870.....	4,668
Quarter ending December 31, 1870.....	10,996
Quarter ending March 31, 1871.....	11,033
Quarter ending June 30, 1871.....	4,574

Total ..... 31,271

## Pages of post office "changes" reported by the Post Office Department during the fiscal year, recorded in the change books :

Quarter ending September 30, 1870.....	1,944
Quarter ending December 31, 1870.....	2,261
Quarter ending March 31, 1871.....	3,325
Quarter ending June 30, 1871.....	2,922

Total ..... 10,455

Pages of Blue Book or Biennial Register prepared for publication ..... 1,596

## Pages of stamp journal added and recapitulated :

Quarter ending September 30, 1870.....	150
Quarter ending December 31, 1870.....	47
Quarter ending March 31, 1871.....	52
Quarter ending June 30, 1871.....	64

Total ..... 313

## Pages of draft register recorded :

Quarter ending September 30, 1870.....	50
Quarter ending December 31, 1870.....	66
Quarter ending March 31, 1871.....	58
Quarter ending June 30, 1871.....	52

Total ..... 226

## Pages of book of balances recorded :

Quarter ending September 30, 1870.....	146
Quarter ending December 31, 1870.....	152
Quarter ending March 31, 1871.....	202
Quarter ending June 30, 1871.....	180

Total ..... 680

## PARTS OF LETTER-BOOKS RECORDED:

Quarter ending September 30, 1870.....	810
Quarter ending December 31, 1870 .....	849
Quarter ending March 31, 1871.....	1,047
Quarter ending June 30, 1871 .....	1,134
<b>Total.....</b>	<b>3,840</b>

## LAW DIVISION—J. BOZMAN KERR, PRINCIPAL CLERK.

To this division is assigned the duty of preparing and transmitting to the Department of Justice, for suit, accounts of late postmasters and contractors who fail to pay their indebtedness to the United States upon the drafts of the Department.

The number of accounts and accompanying papers prepared for suit during the fiscal year was as follows:

In the third quarter of 1870 25 cases, involving.....	\$20,565 98
In the fourth quarter of 1870 20 cases, involving.....	13,859 88
In the first quarter of 1871 30 cases, involving.....	15,928 36
In the second quarter of 1871 17 cases, involving.....	6,118 69
<b>Total.....</b>	<b>92 cases, involving \$56,472 91</b>

Number of judgments obtained during the fiscal year 1871,  
as reported by the Department of Justice, was..... 166  
Amount of collections, including interest..... \$46,204 30

All accounts received from the collecting division have been prepared for suit and transmitted to the Department of Justice.

## FOREIGN MAIL DIVISION.—ISAAC W. NICHOLLS, PRINCIPAL CLERK.

This division has charge of the postal accounts with foreign governments, and the accounts with steamship companies for ocean transportation of the mails.

*Number of accounts of each country settled during the fiscal year, and amounts involved.*

Name of country.	Number of quarterly accounts.	Amount.
United Kingdom.....	Five.....	\$1,711,022 44
German Union.....	Two.....	431,735 47
France.....	Five.....	12,711 63
Spain.....	Five.....	3,556 91
Sweden.....	Five.....	6,412 56
Denmark.....	Five.....	30,460 41
<b>Total amounts involved.....</b>		<b>1,874,619 22</b>

\*German accounts are registered and ready for settlement to date.

\*Treaty expired by notification December 31, 1866. Three accounts remain unsettled; they are, however, registered and ready for settlement.

To this division is also assigned the registration of all warrants and drafts countersigned by the Auditor, and the custody of the archives pertaining to all the branches of the office.

*Accounts of contractors settled during the fiscal year ending June 30, 1871.*

Quarter.	No.	Amount involved.
In the quarter ending September 30, 1870.....	6,839	\$2,336,582 61
In the quarter ending December 31, 1870.....	6,702	2,724,741 92
In the quarter ending March 31, 1871.....	6,870	2,891,316 76
In the quarter ending June 30, 1871.....	6,845	3,006,718 44
<b>Total</b> .....	<b>27,456</b>	<b>10,959,359 83</b>

*Accounts of mail messengers, special, postal railway clerks, route agents, letter carriers, special agents, and miscellaneous payments.*

Quarter.	No.	Amount involved.
<b>MAIL-MESSENGER SERVICE.</b>		
In the quarter ending September 30, 1870.....	2,363	\$92,621 49
In the quarter ending December 31, 1870.....	2,432	95,950 03
In the quarter ending March 31, 1871.....	2,573	99,072 10
In the quarter ending June 30, 1871.....	2,579	101,634 32
<b>Total</b> .....	<b>9,947</b>	<b>389,282 24</b>
<b>SPECIAL MAIL SERVICE.</b>		
In the quarter ending September 30, 1870.....	1,424	\$13,042 64
In the quarter ending December 31, 1870.....	1,580	13,549 95
In the quarter ending March 31, 1871.....	1,406	12,668 07
In the quarter ending June 30, 1871.....	1,454	12,555 31
<b>Total</b> .....	<b>5,864</b>	<b>51,821 97</b>
<b>LETTER-CARRIERS.</b>		
In the quarter ending September 30, 1870.....	1,516	\$340,406 86
In the quarter ending December 31, 1870.....	1,534	338,997 06
In the quarter ending March 31, 1871.....	1,494	339,738 06
In the quarter ending June 30, 1871.....	1,530	335,481 25
<b>Total</b> .....	<b>6,074</b>	<b>1,353,923 23</b>
<b>RAILWAY POSTAL CLERKS, ROUTE AND OTHER AGENTS.</b>		
In quarter ending September 30, 1870.....	1,397	\$305,592 49
In quarter ending December 31, 1870.....	1,333	319,253 74
In quarter ending March 31, 1871.....	1,411	341,326 23
In quarter ending June 30, 1871.....	1,548	355,329 87
<b>Total</b> .....	<b>5,619</b>	<b>1,321,494 33</b>
<b>MISCELLANEOUS ACCOUNTS.</b>		
In quarter ending September 30, 1870.....	173	\$162,150 65
In quarter ending December 31, 1870.....	145	238,006 82
In quarter ending March 31, 1871.....	219	249,966 99
In quarter ending June 30, 1871.....	175	227,291 16
<b>Total</b> .....	<b>742</b>	<b>885,424 72</b>
<b>SPECIAL AGENTS.</b>		
In quarter ending September 30, 1870.....	132	\$37,479 00
In quarter ending December 31, 1870.....	136	32,750 10
In quarter ending March 31, 1871.....	132	35,274 66
In quarter ending June 30, 1871.....	140	34,166 01
<b>Total</b> .....	<b>540</b>	<b>139,669 77</b>
<b>Foreign mail accounts paid</b> .....	<b>166</b>	<b>\$1,061,995 67</b>
<b>COLLECTION ORDERS SENT OUT TO POSTMASTERS.</b>		
In the quarter ending September 30, 1870.....	21,840	\$536,727 13
In the quarter ending December 31, 1870.....	23,411	650,194 40
In the quarter ending March 31, 1871.....	23,008	753,843 88
In the quarter ending June 30, 1871.....	23,000	735,288 95
<b>Total</b> .....	<b>91,259</b>	<b>2,675,921 48</b>



*Amounts reported for payment on account of balances due foreign countries.*

To—	Quarter ended—	Amount in gold.
United Kingdom .....	December 31, 1868 .....	\$19, 129 25
	March 31, 1-69 .....	28, 966 10
	June 30, 1-69 .....	26, 440 20
	September 30, 1-69 .....	24, 068 30
	December 31, 1-69 .....	28, 368 13
	March 31, 1-70 .....	19, 685 90
	June 30, 1-70 .....	15, 1-0 41
Total .....		160, 778 29
Costing in currency .....		\$179, 365 22
North German Union .....	March 31, 1870 .....	\$32, 437 49
	June 30, 1-70 .....	26, 609 91
		59, 107 40
Costing in currency .....		\$66, 722 16
Belgium .....	September 30, 1-69 .....	\$1, 325 60
	December 31, 1-69 .....	1, 353 12
	March 31, 1-70 .....	1, 430 02
	June 30, 1-70 .....	1, 149 03
	September 30, 1-70 .....	1, 369 79
		6, 627 56
Costing in currency .....		\$7, 660 05
Total amount reported .....		\$226, 513 25

The following amounts have been paid in gold by the governments named:

By—	Quarter ended.	Amount in gold.
Switzerland .....	March 31, 1-70 .....	\$1, 028 50
	June 30, 1-70 .....	1, 155 10
	September 30, 1-70 .....	1, 544 99
	December 31, 1-70 .....	1, 970 98
	March 31, 1-71 .....	1, 242 95
Total .....		6, 439 50
Netherlands .....	December 31, 1-69 .....	\$1, 151 02
	March 31, 1-70 .....	342 48
	June 30, 1-70 .....	593 73
	September 30, 1-70 .....	626 27
	December 31, 1-70 .....	772 42
Total .....		2, 485 90
Italy .....	June 30, 1-69 .....	\$1, 112 97
	September 30, 1-69 .....	670 51
	December 31, 1-69 .....	641 69
	March 31, 1-70 .....	1, 1-4 22
	June 30, 1-70 .....	6-0 72
	September 30, 1-70 .....	151 39
	December 31, 1-70 .....	941 95
Total .....		5, 532 54
Total amount paid in gold .....		\$15, 341 42

#### PAY DIVISION—C. HAZLETT, PRINCIPAL CLERK.

This division has in charge the settlement and payment of all accounts for transportation of the mails, including railroad companies, steamboat companies and other mail contractors, special mail carriers, mail messengers, railway postal clerks, route agents, special agents, carriers, and all miscellaneous payments.

To this division is also assigned the registration of all warrants and drafts countersigned by the Auditor, and the custody of the archives pertaining to all the branches of the office.

*Accounts of contractors settled during the fiscal year ending June 30, 1871.*

Quarter.	No.	Amount involved.
In the quarter ending September 30, 1870.....	6,839	\$2,336,582 61
In the quarter ending December 31, 1870.....	6,092	2,724,741 92
In the quarter ending March 31, 1871.....	6,870	2,891,316 86
In the quarter ending June 30, 1871.....	6,845	3,006,718 44
Total.....	27,456	10,959,359 83

*Accounts of mail messengers, special, postal railway clerks, route agents, letter carriers, special agents, and miscellaneous payments.*

Quarter.	No.	Amount involved.
MAIL-MESSENGER SERVICE.		
In the quarter ending September 30, 1870.....	2,363	\$82,621 49
In the quarter ending December 31, 1870.....	2,432	95,950 03
In the quarter ending March 31, 1871.....	2,573	99,072 50
In the quarter ending June 30, 1871.....	2,579	101,684 22
Total.....	9,947	380,328 24
SPECIAL MAIL SERVICE.		
In the quarter ending September 30, 1870.....	1,424	\$13,042 64
In the quarter ending December 31, 1870.....	1,580	13,549 95
In the quarter ending March 31, 1871.....	1,406	12,608 07
In the quarter ending June 30, 1871.....	1,454	12,555 31
Total.....	5,864	51,821 97
LETTER-CARRIERS.		
In the quarter ending September 30, 1870.....	1,516	\$340,406 86
In the quarter ending December 31, 1870.....	1,534	338,297 06
In the quarter ending March 31, 1871.....	1,494	339,738 06
In the quarter ending June 30, 1871.....	1,530	335,481 25
Total.....	6,074	1,353,923 23
RAILWAY POSTAL CLERKS, ROUTE AND OTHER AGENTS.		
In quarter ending September 30, 1870.....	1,327	\$305,522 49
In quarter ending December 31, 1870.....	1,333	319,255 74
In quarter ending March 31, 1871.....	1,411	341,326 23
In quarter ending June 30, 1871.....	1,548	355,329 87
Total.....	5,619	1,321,434 33
MISCELLANEOUS ACCOUNTS.		
In quarter ending September 30, 1870.....	173	\$182,159 65
In quarter ending December 31, 1870.....	145	226,006 92
In quarter ending March 31, 1871.....	249	249,966 99
In quarter ending June 30, 1871.....	175	227,291 16
Total.....	742	885,424 72
SPECIAL AGENTS.		
In quarter ending September 30, 1870.....	132	\$37,479 00
In quarter ending December 31, 1870.....	136	32,750 10
In quarter ending March 31, 1871.....	132	25,274 68
In quarter ending June 30, 1871.....	140	34,166 61
Total.....	540	130,669 77
Foreign mail accounts paid.....	166	\$1,061,295 67
COLLECTION ORDERS SENT OUT TO POSTMASTERS.		
In the quarter ending September 30, 1870.....	21,840	\$336,727 13
In the quarter ending December 31, 1870.....	23,411	650,194 48
In the quarter ending March 31, 1871.....	23,808	753,843 86
In the quarter ending June 30, 1871.....	23,500	733,963 96
Total.....	92,559	2,675,021 43

*Warrants issued by the Postmaster General, passed and registered during the fiscal year.*

Quarter.	Number.	Amount of disbursements.	Amount of transfers.
Quarter ending September 30, 1870.....	1,440	\$2,114,641 87	\$234,374 01
Quarter ending December 31, 1870.....	1,473	1,782,652 89	396,635 51
Quarter ending March 31, 1871.....	1,682	1,684,413 94	330,000 00
Quarter ending June 30, 1871.....	1,465	1,998,312 85	363,173 99
Total.....	6,060	7,580,020 75	1,324,283 51

*Drafts issued by the Postmaster General, passed and registered during the fiscal year.*

Quarter.	Number.	Amount of disbursements.	Amount of transfers.
Quarter ending September 30, 1870.....	3,811	\$579,239 48	\$70,010 88
Quarter ending December 31, 1870.....	3,922	611,178 60	81,415 15
Quarter ending March 31, 1871.....	5,474	691,550 07	122,416 10
Quarter ending June 30, 1871.....	4,494	653,930 60	91,229 49
Total.....	17,701	2,535,898 75	365,071 64

*Report of the archives clerk.*

Quarter.	Reports received and filed.	Postmasters' accounts received and filed.	Receipts for drafts received and filed.	Certificates of deposit received and filed.
Third quarter, 1870.....	5,251	.....	3,520	1,363
Fourth quarter, 1870.....	5,295	.....	3,617	1,173
First quarter, 1871.....	7,166	.....	5,028	1,371
Second quarter, 1871.....	5,979	13,192	4,135	1,632
Total.....	23,791	13,192	16,300	5,546

**MONEY-ORDER DIVISION—JOHN LYNCH, PRINCIPAL CLERK.**

This division was organized less than seven years ago, with but three clerks assigned thereto to perform its duties. At this time the work requires forty-seven clerks and assorters, which force, in consequence of the large increase anticipated during the current fiscal year, contingent upon an international money-order system with the United Kingdom of Great Britain and Ireland, will be entirely inadequate to perform the work. Some idea of the multifarious and responsible duties connected with this division may be formed by taking into consideration the fact that the past year shows money orders issued amounting in the aggregate to over forty-two millions of dollars, at an average of a little over nineteen dollars per order.

The division is sub-divided into five sections: the registers, examiners, deposit drafts and transfers, checkers and assorters, the work being divided as equitably as possible between the clerks.

To this division belongs the auditing of postmasters' money-order accounts, and the collection of balances due from late postmasters; and in this connection it affords me much pleasure to state that, up to this time, there has not been a failure to collect such balances.

The money-order accounts of all postmasters at money-order offices have been audited to June 30, 1871.

*Number of money-order statements received, examined, and registered during the fiscal year ending June 30, 1871.*

Quarter.	Number.	Amount.
Third quarter, 1870.....	26, 748	.....
Fourth quarter, 1870.....	26, 977	.....
First quarter, 1871.....	26, 748	.....
Second quarter, 1871.....	26, 748	.....
Total .....	109, 221	\$83, 920, 276 10

*Number of paid money orders received, examined, checked, and filed.*

Quarter.	Number.
Third quarter, 1870.....	426, 187
Fourth quarter, 1870.....	530, 591
First quarter, 1871.....	610, 362
Second quarter, 1871.....	554, 941
Total .....	2, 122, 081

*Number of certificates of deposit received, compared, and entered.*

Quarter.	Number.	Amount.
Third quarter, 1870.....	23, 990	\$6, 077, 213 39
Fourth quarter, 1870.....	31, 570	8, 065, 128 99
First quarter, 1871.....	36, 799	8, 426, 439 76
Second quarter, 1871.....	33, 277	7, 787, 518 37
Total .....	125, 636	30, 356, 300 51

*Number of transfers and re-transfers entered.*

Transfers.	Quarter.	Number.	Total.	Amount.	Total.
Re-transfers .....	Third quarter, 1870.....	1, 228	.....	\$144, 908 73	.....
	Fourth quarter, 1870.....	1, 319	.....	148, 138 09	.....
	First quarter, 1871.....	1, 455	.....	140, 548 75	.....
	Second quarter, 1871.....	1, 395	5, 397	125, 390 89	\$528, 966 46
	Third quarter, 1870.....	68	.....	18, 214 25	.....
	Fourth quarter, 1870.....	65	.....	10, 624 94	.....
	First quarter, 1871.....	75	.....	132, 858 07	.....
	Second quarter, 1871.....	81	289	72, 908 86	234, 506 12
Total .....		.....	5, 686	.....	793, 492 56

*Number of money orders returned for correction.*

Quarter.	Number.
Third quarter, 1870.....	1, 008
Fourth quarter, 1870.....	1, 217
First quarter, 1871.....	2, 572
Second quarter, 1871.....	2, 008
Total .....	6, 805

*Number of drafts entered.*

Quarter.	Number.	Amount.
Third quarter, 1870.....	1, 692	\$608, 077 14
Fourth quarter, 1870.....	1, 889	1, 016, 587 86
First quarter, 1871.....	1, 835	1, 001, 180 00
Second quarter, 1871.....	1, 972	922, 383 00
Total .....	7, 388	3, 650, 228 00

Having thus, with as much brevity as is consistent with the complex nature of the subject, explained the organization and practical working of my Bureau, I cannot close this report without expressing my high sense of the efficiency of the chief clerk, Mr. McGrew, the heads of divisions, and, indeed, of the employes generally under my charge.

I have the honor to be, very respectfully,

J. J. MARTIN, *Auditor.*

HON. GEORGE S. BOUTWELL,  
*Secretary of the Treasury.*

## REPORT OF THE TREASURER OF THE UNITED STATES.

TREASURY OF THE UNITED STATES,  
Washington, October 31, 1871.

SIR: Another year has made its round, and has brought with it the obligation, on my part, to make a statement to you of the condition of the Treasury of the United States, as it was at the close of the fiscal year which ended with the 30th day of June, 1871. Full tables are appended hereto, that will exhibit to you more readily and clearly than could be done through mere verbal statements, the money transactions and the general movement of the office during said fiscal year.

In addition, I desire to make a statement in regard to my own action during the past season, and some suggestions bearing upon the interest of the public service in the future.

### NEGOTIATION OF NEW LOAN ABROAD.

Under authority of your commission I have visited, during the past season, the principal cities of Great Britain, and of Belgium, Holland, Prussia, Saxony, Baden, Bavaria, Württemberg, Austria, Bohemia, Switzerland, and France, "for the purpose of aiding in the negotiation of the new loan." In compliance with your written instructions, I called "upon the agents appointed by the Government, with a view to ascertain the steps already taken by them," in regard to the negotiation of the loan, and made to them "such suggestions as seemed expedient to place the subject in a favorable light before the European public." With the same object in view, I called upon our ambassadors and ministers, and upon our consuls and commercial agents, and upon many bankers and financial men, in the countries named. Through this intercourse with all kinds of persons, who were well informed upon such subjects, I learned that the time for placing our new loan was an unfavorable one for its success in the European money markets. It was too late, and too war.

Had Congress given you the authority to negotiate this loan before the breaking out of the late war that France made upon Germany, it would have been all taken at once at that time. But later the bonds of several other governments were in these markets, and were offered at rates much more favorable to the purchaser than those authorized by Congress for the negotiation of our loan. Prominent among these was the new French five per cent. loan. This loan of the French Republic was finally disposed of at a rate that netted the borrower less than eighty cents on the dollar. The singular feature in its negotiation was, that it was largely taken by the late enemies of the French, the Germans. Germany had theretofore, next to our own country, been our principal reliance for the disposal of our stocks; and

there was every hope that but for this French interference, that country would have alone absorbed all our stocks that were offered for sale. Under these existing circumstances, it was hardly to be supposed that the German people could then be induced to take our loan, when they could, at the same time, purchase *five thousand dollars*, face value, of the French bonds, bearing the same rate of interest as ours, for *less money* than would purchase *four thousand dollars*, face value, of the bonds of the United States. But notwithstanding this disparity between the prices of the two stocks, in consequence of the credit of our Government standing so high in the money markets of Europe, and especially in those of Germany, our loan, although netting the holder more than one-fifth less in interest, would have been taken in preference to the French, but for the fact that it was generally understood by the German people that, inasmuch as the proceeds of the French loan were to be paid to their governments, their rulers would consider the subscription to such loan, by their subjects, an act of patriotism. It was, moreover, generally understood that the German Empire would, if need be, enforce, in favor of its subjects, the punctual payment of the interest, and the repayment of the principal of the loan at the maturity of the bonds. Another circumstance unfavorable to us was, that the French government allowed to its agents, for negotiating its loan, at least two per cent. on the net proceeds realized from it, while you were authorized to allow to your agents an amount that would yield to them only one-quarter of one per cent. In addition to these advantages in favor of the French, they had in circulation five per cent. treasury notes that had not matured; these the government agreed to take in payment for subscriptions to its loan, allowing the purchasers unaccrued interest on these notes to their maturity.

An almost insuperable difficulty in the way of the negotiation of our loan was this low rate of commissions that it was provided to allow your agents for the disposing of the stock. With a single exception, and in that case he disagreed with the other members of his firm, every banker and business man with whom I conversed on the subject gave it as his opinion that one-quarter of one per cent. was altogether too small a compensation for the services to be rendered and the risks to be incurred. It was generally insisted that, inasmuch as other governments allowed at least two per cent. for like services, ours would, under any circumstances, be compelled to allow the same rate of compensation, before any considerable amount of the stock could be negotiated. It is known to you that the house of Hope & Co. of Amsterdam—a house that has loaned much money to our Government, commencing with our revolutionary war—refused to act as your agent on that account. A member of the firm said to me that their house had never worked for such a pitiful compensation. It was frequently intimated that many who had accepted agencies had done so for the honor it conferred on them, and not because they had hoped to succeed in disposing of any considerable part of the loan. These facts, and others as discouraging, I reported to you by letters at various times and places. Luckily, you were not disheartened by my reports, but you sent your able assistant, Judge Richardson, to Europe, with several million dollars' worth of the bonds. On his arrival in London, I, then being at Frankfort-on-the-Main, immediately put myself in communication with him, and suggested to him a plan by which the whole amount of the five per cent. loan could probably be placed. He advised me of another plan that he had devised, which, with alterations suggested by you, has succeeded, and which, I am now

satisfied, was the very best thing to be done. It is certainly a source of gratulation that, by your own and Judge Richardson's adroit management, all obstacles were removed, and the loan was disposed of at a day much earlier than I, who had been and looked over the whole ground, had supposed it possible. It is, therefore, not to be wondered at that even our friends at home should have disbelieved in what is now known to be an accomplished fact.

The enemies of the Government are not even now satisfied, and would perhaps be equally dissatisfied, whether the loan was or was not taken. While yet in Europe, and after the loan had been taken, I noticed that American newspapers very unfairly criticised your action in regard to this loan: some insisting that you had "not placed the loan, or any part of the loan;" that you had "spent a round million in fruitless advertisements, in fees to useless agents, and in sending superannuated Treasury clerks on junketing tours to Europe;" and that the whole ended in "a disastrous failure." Others conceded that the loan might perhaps be taken; but if it was, it had been hawked about Europe in a manner disgraceful to the American people "for six months;" while "the finance minister of the French Republic, emerging bruised, bleeding, and dismembered from one of the most calamitous wars in history, succeeded in placing a loan of equal amount in hardly more than the same number of hours."

The first cavilers are now silenced by the fact known to all well-informed persons, that all the five per cent. stocks offered by you have been taken, and that the Government has now none for sale. The other grumblers will probably never have the fairness to inform the readers of their papers that while you realized the face value of one hundred cents on the dollar on your new five per cent. loan, the French government received less than eighty cents on such value; and that for the eighty cents that government will be obliged to pay, at the maturity of its bonds, more than a quarter more money than it received, and in the mean time pay for the eighty cents the same rate of interest that our Government will pay on the par value that it received for its bonds of one hundred cents to the dollar. It was to me a most gratifying fact that the credit of our Government wherever I heard it spoken of, in all parts of Europe, stood unchallenged. Everybody conceded that we had both the ability and the disposition to pay all our debts. The rapidity with which you have been enabled to pay and reduce our national indebtedness is the controlling cause of this unbounded confidence that our Government will always remain faithful to its promises.

Other governments that have a financial standing have supplied their needs, and, like our own, are now out of the way, and surplus capital has again aggregated in the money markets of Europe. Under these changed circumstances, it is believed that if Congress will vest you with larger discretionary powers in regard to the compensation to be allowed to agents and other expenses attending the negotiation, and if it will authorize the interest to be paid in the country, and in the coin of the country, where the bonds may be purchased and held, the remaining loans of four and a half per cent. and four per cent., already authorized by Congress, can soon, unless untoward circumstances again intervene, be disposed of in Europe at par. I found that the most serious objection that Europeans made to our stocks was that the holder of them could not calculate exactly what dividend he would receive when the interest fell due. The rate of exchange of Europe with this country fluctuates so much, from time to time, that the amount the holder of our bonds will receive for the periodical interest due thereon will be sometimes more

and sometimes less than he expected, and rarely the amount specified in the bond. This creates ill-feeling, and a jealousy on the part of the holder of our stock that his banker does not deal fairly by him; and the banker who, perhaps, bought and sold this very stock, becomes disgusted with the explanation he is constantly called upon to make in regard to the discrepancies in the amount of interest that he pays or carries to the credit of his customers. Rather than be thus annoyed, he makes up his mind in future to have nothing more to do with our stocks.

Who of our people can borrow money at home of our banks on his paper, having the interest and principal payable at his own distant home? Would a New York capitalist loan money to the Mexican Republic, were its credit ever so good, at the same rate of interest, if the interest and principal were made payable in the city of Mexico, that he would were both these payments to be made in the city of New York? The difference in the *amount* of interest to be paid on our bonds held in Europe would be comparatively *small*, whether paid at home or abroad. The saving in the *rate* of interest to be paid on moneys borrowed abroad would be *great*. The annoyance to the foreign bondholder would cease. Our stock would become the favorite one in the European money markets, and then there would be little or no danger that it would be thrown back upon our own markets in seasons of commercial revulsions. This last consideration our merchants and business men, who have innocently suffered by such return of our stocks from Europe, will understand and appreciate.

Many of our people object to making the interest on our loans payable in a foreign country, alleging as a reason that it lowers the dignity of the nation. Were it not true that, if there is any loss of dignity in money transactions, it occurs at the borrowing of the money, and not with the payment of the interest thereon, it might be worth the while for our legislators to go into the calculation of the commercial value of national dignity. In the present financial condition of our country, it can ill afford to pay an extra percentage to save itself from an imaginary loss of national dignity. While upon this subject, it just occurs to me that those of our people who are so very sensitive on this subject, and who are so anxious to sustain the dignity of the nation abroad, could find a much surer way to carry out their views and accomplish their end if they would insist that the representatives of the nation in foreign countries, who are commissioned to look after its interest and sustain its honor, should be paid a compensation on which they could subsist their families, and live decently, if not respectably. Most of our ambassadors in Europe are obliged to draw largely upon their private resources, in order to sustain our national dignity abroad. With the consuls it is much worse. I found them without a habitation, "browsing around," having their offices in garrets, with stairs leading to them so steep that it was difficult to ascend them. On expostulating with one of these officers, in the capital of a highly commercial country, he informed me that he was not able to do otherwise. In order that he might keep out of debt, he was obliged to leave his family in America, and himself live in the most economical way; that he was determined to avoid the faults of his unfortunate predecessors, for whose unpaid debts he was yet being constantly dunned. What was worse, the creditors believed that the debts were the debts of the nation, and not of the individual consuls. I do not know how this strikes others, but I must confess that, as an American citizen, I felt ashamed. And yet I am sure I should not entertain such a feeling if the interest of our debt owned in Europe were made payable there. I must be excused for urging these views, for I



feel a conviction that if they are carried out there will, for some time to come, be saved millions of dollars annually.

#### A LIBEL REFUTED.

On my return from Europe I was shown, in a New York newspaper, an infamous libel upon the Treasury Department generally, and upon me in particular. It was headed, in double leaded lines and large capital letters, "Leak in the Treasury—Millions of dollars abstracted—Mysteries brought to light—List of warrants drawn and not accounted for—Wholesale destruction of ledgers—Prodigious disclosures of fraud." It then goes on to state that "it is now positively known that every Department of the Government is reeking with corruption, and that millions of the public money have been abstracted from the Treasury." "In order to take out this money, it was entered as against the Treasurer, under the pretense that it was needed for disbursements, but it has never been accounted for." It alleges that "certain officers in the Bureaus of the First Comptroller and First Auditor were long privy to these transactions, but such was Spinner's influence with Congress, and such his power with the party leaders, whom he supplied liberally with funds, that they feared to expose the facts. The officers of the Treasury have made every effort to prevent this information from reaching the public, and upon being questioned upon the subject stoutly deny the truth of it. But the number, date, and amount of every warrant drawn for the money are known, and this bold front of partisan and office-holding brass will not avail. The facts are but too plain and irrefutable, and it is only to be feared that they are only the beginning of numerous and greater peculations, particularly in the Navy and War Departments of the Government, and that a large portion of the whole FOUR HUNDRED AND TWENTY MILLIONS OF DOLLARS EXPENDED annually by the Government, will turn out to have been expended for the benefit of the gigantiering of radical swindlers which centers in Washington City." And then asks, "What was done with the \$3,000,000 which were drawn from the Treasury? No record of this vast amount appears on the books." Then, after preaching a homily to the Secretary of the Treasury for not reporting the facts, and quoting from laws that make it his duty "to lay before Congress an accurate statement and account of the receipts and expenditures of all the public moneys," it proceeds with a "STARTLING ARRAY OF DAMNING FIGURES, being a list of warrants for money drawn by Francis E. Spinner, and not accounted for." Here follows a list of sixty-one warrants, fifty-six of which are tolerably accurately described, except that the name of the payee is forged in every instance. The list is in the following form; the items are taken promiscuously:

Number of warrant.	Date.	In whose favor drawn.	Amount.
1422	Sept. 1, 1867	F. E. Spinner	\$2,838 37
1423	Aug. 1867	F. E. Spinner	12,835 00
1424	Aug. 1867	F. E. Spinner	7,044 00
1425	Nov. 1867	F. E. Spinner	20,000 00
1426	July, 1868	F. E. Spinner	300,000 00
1427	July, 1868	F. E. Spinner	127,679 30

There are described in the same table fifty-five other warrants, that are each specified by number, date, and amount, with the name of "F. E. SPINER" repeated in every one of them, under the head of "In whose favor

drawn," as above. An examination has been made in the various Bureaus of the Department of the books and records, and of the warrants themselves, fifty-six of which have been found, with dates and amounts tolerably correct, except a few typographical errors, and that in making up the table the numbers in twenty consecutive items were slid up one line. But they were so accurately described that they were easily found. In every one of these the name of the payee has been knowingly and maliciously falsified and forged. Five of the pretended warrants are fictitious. None such exist. The first warrant in the table, and as stated in the copy, is No. 3455 for \$2,932 37 and is payable to "*Treasurer U. S., on ac. Internal Rev., as a receipt from Tax on Salaries,*" and not to "*F. E. Spinner.*" There are thirty-three others in this list, in amounts varying from \$126 72, No. 33, to \$105,594 22, No. 951, and all made payable in like manner. All these thirty-four warrants, being more than half the number specified in the whole list, have the same history.

It was the invariable practice of the War Department, when an income tax on the salaries was retained from the pay of its officers and employes, to make requisitions quarterly on the Treasury Department for the amount of the aggregate salaries, *less the income tax*, in favor of a disbursing officer, who drew the money and paid the salaries less the tax; and then to make another requisition for the gross amount of the tax that was withheld. On these last-named requisitions warrants were issued in form like the one first above described. All the thirty-four above mentioned were of this precise character and tenor. Certificates of deposit in triplicate were issued immediately on the receipt of each warrant for the amounts specified in each warrant respectively, one copy for the War Department, one for the Commissioner of Internal Revenue, and one for the Secretary of the Treasury. On the receipt of each of these certificates, the Secretary of the Treasury caused covering warrants to be issued for the respective amounts named, by which the money was carried into the Treasury of the United States, to the account of internal revenue receipts of tax on salaries. Every one of the thirty-four amounts named in the list, as having been paid to "*F. E. Spinner,*" was so treated, and so placed in the Treasury, as appears upon all the books; and each amount had been accounted for to, and passed upon as correct by, the First Auditor, and the audit had been confirmed and finally settled in my account by the First Comptroller of the Treasury, and his letters verifying the fact of such settlement, except for a single item hereinafter mentioned, embracing the whole list of fifty-six warrants described in the list, and which were found, had been in my possession, some of them for over one year, and all the others for over two years, before these infamous charges were published by the falsifier, who, from his evident access to the books and papers of the Department, must have known all these facts when he invented his wholesale lies. But all that has been said in regard to these thirty-four tax warrants is a simple statement of the routine of the business of the Department when moneys are transferred from one account or appropriation to another. In reality, no money was handled or passed into or out of the Treasury on any one of these thirty-four warrants and their complementary covering warrants. They simply accomplished the transfer of the several amounts specified in each from accounts of appropriations for the War Department to the credit of internal revenue for receipts from tax on salaries. The money either still remains in the Treasury, or it has been drawn out on other money warrants, to satisfy the creditors and pay the debts of the United States.

Eleven other of the warrants specified in this libelous article, instead

of being payable to the order of "*F. E. Spinner*," as is charged, are made payable to the order of the "*Treasurer U. S., to the credit of C. C. Jackson, Paymaster U. S. Navy.*" No. 1153, for \$12,835, the second one in the foregoing table, is one of these. Every one of these eleven warrants was credited for the full amount on the day on which the proper drafts that were issued on them came back from the office of the Register of the Treasury. All these moneys have since been drawn out on Paymaster Jackson's checks. No money passed out of the Treasury on any one of these eleven warrants; they simply effected transfers on the books, from appropriations made for the Navy, to the agency account of a naval disbursing officer, to be used for payments on account of the Navy, and to be accounted for to the proper accounting officer by the *paymaster who disbursed the money, and not by me*. I showed to the satisfaction of the proper Auditor and Comptroller that the transfer had been made; and it being found that the paymaster had received the money, my charges were necessarily allowed in the settlement of my accounts.

Four other warrants, specified in the list as being payable to the order of "*F. E. Spinner*," read, "Pay to Treasurer U. S. to the credit of Brvt. Brig. Genl. G. W. Balloch, Chief D. O. Bureau of Refugees, &c.," and state that their amounts are from an "appropriation" for "Support of Bureau Refugees, Freedmen and Abandoned Lands." All that was said in regard to the eleven warrants for credit of Paymaster Jackson is equally applicable to these four, that were, in accordance with the directions contained therein, placed to the credit of General Balloch.

Seven other warrants specified in the list as being payable to "*F. E. Spinner*," are made payable severally as follows: No. 4679, for \$20,000, reads, "Pay to Treasurer U. S., to the credit of Lieut. L. B. Norton, 30th Inf'y, and Disbursing Officer Signal Dptn't." This is the fourth in the above list.

No. 841, for \$300,000, is a war warrant that reads, "Pay to Brvt. Brig. Genl. Charles H. Tompkins, Deputy Quartermaster General, New Orleans, La.," and the draft for the amount is drawn on the "*Ass't Treasurer U. S., New Orleans, La.*" The draft bears the indorsement, "To be deposited to my official credit with Ass't Treas'r U. S., at N. Orleans, Charles H. Tompkins, Brvt. Br'g. Gen'l & Dep. Q. M. Gen'l." This is the fifth in the list. Neither my own name, private or official, nor that of my office, appears anywhere in or on this warrant, or in or on the draft that was issued on it. The date, number, and amount are correctly stated; all else is a deliberate forgery and lie.

No. 3113, for \$30,000, reads, "Pay to Treasurer United States, to the credit of B't Lt Col. F. W. Taggard, U. S. A., Must'g and Disb'g Off'r." The direction on this warrant is to place with United States Treasurer at Washington \$20,000, and \$5,000 with each of the assistant treasurers at New York and at St. Louis, to the credit of Colonel Taggard. It was so placed, as appears by the indorsements upon the three drafts that were issued upon the warrant upon the three offices named.

No. 5183, for \$20,000, reads: "Pay to Assistant Treasurer New York City \$10,000, Treasurer U. S. \$10,000; both to the credit of Bt. Lt. Col. Geo. McGown, Disb'g Officer Adj't Gen'l's Office, Washington, D. C." Both the amounts were so placed, as appears by the indorsements on the draft attached to the warrant.

No. 4451, for \$78,044 00, reads: "Pay to Treasurer U. S., to be deposited to the credit of Honl. O. H. Browning, Secretary of the Interior, in trust for various Indian tribes, as principal and interest on certain heretofore unpaid Missouri State bonds," "being part of the

amount found due to State of Missouri, on settlement of her ac. for militia expenses during the rebellion." The amount was so credited. This is the third described in the table.

No. 5088, for \$3,500, is a prize case, with which the Treasurer has nothing whatever to do. The custody of all prize money belongs to the Assistant Treasurer by law of Congress. The warrant reads, "Pay to Assistant Treasurer U. S., Washington, D. C., to be held subject to such order as may be made in relation thereto by the Dist. Court of U. S. for the Dist. of Columbia;" and states that it is "Due Prize Steamer Gov'r A. Morton." The draft bears the indorsement, "Credited as within directed, L. R. Tuttle, Ass't Treasurer U. S.," dated December 19, 1867.

No. 4553, for \$635, reads, "Pay to Treasurer U. S., to be deposited to the credit of Griesenz Smither, Altheim, county of Oberamth, Kingdom of Würtemberg, Germany." On June 11, 1868, the First Comptroller, by an order in writing upon the face of the warrant, directed the amount to be paid to "Leopold V. Bierwith, consul general of Würtemberg, at New York, as attorney in fact of the heirs of Griesenz Smither," and on the next day it was so paid, as appears from Mr. Bierwith's receipt on the draft that is attached to the warrant on file.

Fifty-five warrants of the sixty-one described in the charge that the money payable thereon had not been accounted for are now explained. Besides the five alleged ones that exist only in the fertile imagination of the willful falsifier, but one, No. 1517, the last in the foregoing list, remains. This, instead of being payable to "F. E. Spinner," as is falsely stated, reads, "Pay to the Treasurer of the United States, as a special deposit, subject to the direction of the Secretary of the Treasury, by letter, one hundred and twenty-seven thousand six hundred and seventy-nine dollars and twenty-eight cents, due the State of West Virginia on settlement." The statement is made on the warrant that it is for "reimbursing West Virginia for militia expenses during the rebellion." Payment was for a time withheld on this warrant, on the request of the Secretary of the Interior, until the question of the State's liability for non-payment of interest on Old Virginia stocks held by him in trust for various Indian tribes should be settled. The legal officer of the Government gave an opinion against the State's liability, whereupon the Secretary of the Treasury directed me by letter "to send draft for the amount of \$127,679 28 in favor of William E. Stevenson, governor of West Virginia, at Wheeling, W. Va." The draft for the whole amount was paid to Governor Stevenson on the 13th of July, 1869, as appears by his official indorsement upon the draft attached to the original warrant, on file in the office of the Register of the Treasury. My charge for the payment of this warrant was audited, passed to my credit, and settled in the second quarter of 1869, as appears by the letter of the First Comptroller in this office, dated March 7, 1871.

The name of "*F. E. Spinner*" is repeated sixty-one times in the descriptive table of warrants, published in the newspaper article, as the payee in that number of described warrants, when, in truth and in fact, as is herein shown, he is not the payee in any one of them. And I will add, that no warrant was ever issued payable to "*F. E. Spinner*" at any time, either before or since I came into this office, for any amount or for any purpose whatever.

It is further charged, in the same article, that "the books are not kept by double entry, and that a number of the account-books have been allowed to be destroyed." When I came into the office, more than ten years ago, I had the manner of keeping the books changed from single to

double entry, and increased the number, so as to make them checks on each other. The books have been so kept up to this time.

Again, it is charged that "a large number of ledgers are missing." This is equally, with all the other charges, false. Every book of accounts that I found in the office in 1861, and every one that has been opened since, is now in the office. The whole series, by years, in every division, is complete and in perfect order, of which fact any one wishing to know may satisfy himself by personal inspection. Again, it is charged that "six cart-loads of account-books were permitted to be mutilated and then taken out of the Treasury building to be sold for paper stock; and that nothing now remains of them but the two boxes full of the red leather labels, which were torn off of them with the intention of destroying them by fire." This charge, like all the others, has just enough truth in it to give plausibility to a deliberate lie. The *immaterial* facts stated are *true*, and all the *material ones* are *utterly false*. There was a number of books of printed forms, procured by a former administration of the Department, and needlessly bound, being principally "Steamboat inspectors' certificates" and "Western river pilots' licenses"—the latter long since obsolete, and the former soon to become so. Neither could be used bound up in a book, but must be cut out for use. It was ordered, for economy's sake, that the covers be taken off from all these books, the blanks that could be used for their designed purpose to be so used, and the remainder for other office purposes; and the covers to be used for other needed books. A few other books of forms, that are now obsolete and useless for the purposes for which they were prepared, have been treated in a like manner. A few small books of naval paymasters' returns, that were in duplicate in the office of the Fourth Auditor, and of no earthly use to the Department or any one else, have also been taken to pieces and the material used for needed purposes. The labels were saved for use. Now, this wholesale falsifier must have known, from the labels and from the paper that he saw, that neither had ever belonged to "ledgers" or to any other "books of accounts," and he knew that, with the exception of the *duplicate* "paymasters' returns," not one of them had ever been used for any purpose whatever, and that not a written word or figure, nor a stroke of a pen, had ever been made in any one of the books that he speaks of as "books of accounts."

This charge of the destruction of "six cart-loads of account-books," like the one that I had taken on warrants made payable to "F. E. Spinner" money amounting to \$3,103,057 63, and for which I have not accounted, is, I hope, sufficiently disproved by the foregoing simple statement of facts, the truth of which can be verified by any one who may choose to examine the records and papers that are accessible in the various offices of the Department to which they properly belong. The charge that I "arrived in England on the 20th of May, and proceeded to Baden, where he [I] parted with his [my] companions and disappeared," is in perfect keeping with all the rest. The whole article from the beginning all the way through to the ending, so far as any material fact is concerned, is an unmitigated lie, and was so known to be by its getters-up when it was invented, penned, and published.

These statements have been made particularly full and much in detail, because it was the only way that a negative could be proved. Each item has therefore been taken up separately and by itself, the warrants by their numbers and the amounts of money payable thereon, and the books by their kinds and titles; so that any one so disposed may be able to look up all the books and papers referred to, and thus satisfy

himself that each and every distinct charge made has not only been disproved, but that it was made by the libeler with the full knowledge, at the time of making it, that it was a deliberate and atrocious falsehood.

General charges against my official conduct, or against the management of the office given me in charge, I have never noticed. *These* charges were, however, made so maliciously specific, that even fair-minded men who did not know me nor the facts, nor the characters of those who published them, might be led to believe that there might be some foundation of truth in them.

It had been said of municipal officials of a northern city, that "they do not deny the charges of robbery of the public money made against them." There is reason to believe that, taking advantage of my absence in a foreign land, these false charges against the Treasury Department that originated in the organ of the "Ring" in that city, whose editor is one of its members in the Senate of the State, were "back-fire" and "stop-thief" dodges, and made with a view to draw attention from themselves and their "stealings," and that they might say, "Why should we deny general charges of official dishonesty, when an official of the National Government, who is charged more specifically with greater wrong-doing, makes no denial?"

These were motives that induced me to swerve from the general rule, to give no heed to slanders and libels.

Another reason was, because I hold that the people have a right not only to *believe*, but to *know*, that their servants who administer their public affairs, or who have the custody and disposition of their money, are faithful and honest.

When I first entered public life, more than forty years ago, I made it a law to myself never to do an official act that I was not willing everybody should see me do. This rule I have never broken in a single instance, and so long as God continues to give me the strength to adhere, I never will break it. I have now held this office for more than ten years, and in that time have perhaps had such opportunities, and what would to some have been such temptations, for making money, as have rarely been put within the reach of any man. I might easily have become rich by speculations in stocks by my knowledge of the Government's intentions in advance of others. I have never used this knowledge for my own or the interest of any other person. Since I have been in the office I have never engaged in any speculations nor in any business whatever. I have given my whole time and attention, night and day, to the utter neglect of my own, to the care of the public's business and interest; and in consequence thereof am now, at that age that is the time allotted to man in this world, as poor in pecuniary things as I was on the day I came into this office. I have but little to leave to my children, save an honest reputation, and that it is my purpose to keep and protect, and, if necessary, to defend, even to the extent of appealing to the criminal courts of the country, for the conviction of its libelers. I have never taken, nor permitted others to take, from the Treasury a single cent, nor any greater amount, except by authority of law. If there are wrongs in this office, or here in the Department, or if there have been any since I have been in it, I am in entire ignorance of them, and feel quite sure that none other except such as have been officially reported, and whereon the parties implicated have been pursued, and when caught were convicted and punished, have existed, or do now exist.

It may be doubted which does the most to undermine confidence in our republican institutions—permitting thieving officials to escape pun-

ishment, or the apathy with which the public mind receives infamous charges against trusted public officers.

#### SECURITIES DEPOSITED BY INSURANCE COMPANIES.

The laws of the State of New York require (§2 Revised Statutes, page 771) that before any foreign life insurance company can do business in that State, there shall be filed in the insurance department of the State the certificate of "the chief financial officer" of the State by whose laws such company is incorporated, that there is deposited with him in trust, for the benefit of the policy-holders of the company, one hundred thousand dollars in stocks or securities.

In order to avail itself of the privileges of this act and of similar enactments in other States, the National Life Insurance Company of the United States of America, incorporated by the Congress of the United States, and having its office in this District, deposited in this office one hundred thousand dollars in United States bonds, for which the Treasurer issued the certificate required by the laws of the State of New York, which certificate was accepted as sufficient by the insurance department of that State. The form of the certificate thus given is in words and figures as follows, to wit:

*TREASURY OF THE UNITED STATES, Washington, D. C.:*

I, F. E. Spinner, do hereby certify that I am Treasurer of the United States, and that the National Life Insurance Company of the United States of America, a corporation chartered by Congress, located at Washington, in the District of Columbia, has heretofore deposited in this office stocks of the United States, amounting in par value to not less than the sum of one hundred thousand dollars. And I do hereby further certify that such securities are now held by me in this office, as such Treasurer aforesaid, in my official capacity, on deposit and in trust for the benefit of all the policy-holders of said company, and to enable said company to comply with the laws of the various States in order to do business therein. And I further certify that I am satisfied that the said stocks and securities are worth one hundred thousand dollars and upwards. Said deposit was made in this office on the 12th day of August, A. D. 1868, and has ever since that period remained at all times intact for the full amount of one hundred thousand dollars in the stocks and securities above specified.

In witness whereof I have hereunto set my hand and caused my official seal to be affixed at the Treasury Department on this 31st day of December, A. D. 1870.

F. E. SPINNER, *Treas. U. S.*

Certificates of similar purport have been given by the Treasurer for use in other States. Some time in April last the \$100,000 in United States bonds were withdrawn and one hundred and ten thousand dollars par value, in United States four per cent. coupon certificates of indebtedness of 1870, issued to the State of Maine for advances made during the war of 1812, were substituted therefor. These certificates are payable to bearer, and are not assigned to the Treasurer, the evidence of the purposes for which they are held being the letter that accompanied and which is on file with them.

After this deposit had been made, the National Capitol Life Insurance Company, another corporation in this District incorporated by Congress, deposited for the same purpose promissory notes amounting to \$102,000, secured by deeds of trust on unincumbered real estate, valued, by appraisers appointed by the insurance department of the State of New York, at \$247,000. This real estate has been conveyed to the Treasurer of the United States, in his official capacity, and to his successors in office, in trust for the policy-holders of said company, by a deed of trust, executed by the trustee and grantors of the above-mentioned deeds of trust. Policies of insurance amounting to \$26,000, on the improvements on this property, have been assigned to the Treasurer as trustee,

and filed with the other papers in his office. For these deposits a certificate in accordance with the facts stated was given by the Treasurer, to be filed in the insurance department of the State of New York.

It is proper that the facts should be stated that payment of the above-mentioned notes is promised, as appears from their tenor, when and as the same may be required by a vote of the directors of the company, the notes being payable to the order of the company. The deeds being merely collateral to the notes, it would seem that the Treasurer cannot dispose of the property for the benefit of the policy-holders until there shall have been default in the payment of the notes. As payment of the notes can be demanded only by the directors, the Treasurer would seem to be unable to make any sale for the benefit of the policy-holders in case of a failure of the company to meet its engagements, without the co-operation of the board of directors.

In addition to the difficulties already enumerated, the taking of these trusts by the Treasurer was extra-official, there being no law of the United States requiring him to take or hold securities for the purposes as above stated. It is therefore doubted whether the securities held by the Treasurer, in trust for the two before-mentioned insurance companies, could be made available in the manner that was contemplated by the legislatures of the States that enacted the laws for the protection of its policy-holding citizens.

Strongly impressed with the conviction that all corporations that by their charters are authorized to have money transactions should be compelled to give ample security for the faithful performance of all their obligations, I would most respectfully suggest that Congress be asked to so amend the acts of incorporation under which the two above-named insurance companies were created as to compel each of them to deposit, in lieu of their present unauthorized securities, at least one hundred thousand dollars in the new five per cent. bonds of the Government, with the Treasurer of the United States, and assigned to him in trust for the benefit of the policy-holders of said companies respectively, in case default should be made by them in paying their legal liabilities to said policy-holders.

In this connection it may perhaps not be inopportune to suggest the propriety of having established by law of Congress a governmental bureau to have charge of the affairs of all kinds of insurance companies and associations, in the same manner as the Comptroller of the Currency now has charge of the affairs of all the banks that issue paper money in the United States.

At the meeting of the national insurance convention, held in the city of New York, in May last, N. D. Morgan, esq., president of one of the largest insurance companies in that city, said :

The reasons why I would prefer a national bureau to the present State supervision are patent to every officer of our present companies.

Life insurance, to be successful, should not be confined to one locality. The business of a company should be extended over as great an extent of territory as possible, in order to equalize, as far as may be, the rate of mortality among its members in seasons of epidemics. A company doing an extended business in the city of New York, and in all the large cities of the United States, would hardly be affected in case of a plague raging in one of those cities, while the others are exempt; the income from the exempt district compensating for any excessive claims from the infected one. It is therefore important that the largest liberty to transact business throughout the whole country should be accorded to our life insurance companies.

Under the present system of State legislation it is very difficult for our companies to so extend their business. Restriction after restriction is thrown up against the work of the insurance agent throughout the length and breadth of the land, as though the business involved some terrible harm to the public, instead of the life-giving stream of joy and gladness that it is to the widow and the orphan.



This, to enable the work to go on as it should and would were matters different, should be remedied by the creation by Congress of an insurance bureau, to which every company in the country should report, to enable it to transact business outside of the State where located. The filing of such report, and with such deposit in the Treasury as is now demanded by our own State laws, and with satisfactory evidence of solvency as the laws of Congress might demand, should secure to such reporting companies every benefit of authority to transact business within any State of the Union, without regard to any State or municipal laws whatever.

Mr. Morgan's views in regard to life insurance companies are equally applicable to fire, and, to some degree, to marine insurance companies. From personal intercourse, and through written communications with other officers of leading insurance companies, I have become satisfied that the better class of these companies would favor a law creating a bureau of national insurance companies, and that would provide for a deposit in stocks of the General Government, with the Treasurer of the United States, pledged for the security of the policy-holders of such companies.

The president of one of the leading and largest life insurance companies in the United States has written me the information that the assets of all the fire, marine, and life insurance companies, doing business in the United States, amount to four hundred and twenty million dollars; and that the amounts at risk in these companies amount to twenty-five hundred million dollars: being greater in amount than the whole national debt. He says, in view of the hope that a national bureau will be created, that "it is impossible to contemplate these stupendous aggregates and their vast annual accumulations, laden, as they all are, with the trusted elements of material welfare and human happiness, without anxious desire to anticipate future developments."

The establishment of such a national bureau would bring confidence to the insured, and would add large numbers to the millions of our people who now have a pecuniary interest in the stability of these useful and benevolent institutions. In addition, the creation of such a bureau would create a home market for a large amount of our new stocks bearing a less rate of interest than is now paid on the old United States stocks; thus conferring the double benefit of assurance from loss to many and partial exemption from taxation to all our citizens.

#### NATIONAL BANKS.

The delays of banks in making their semi-annual returns, and in the payment of duty referred to in my last annual report, have increased during the last fiscal year. Most of the national banks pay the tax due from them promptly, within the time specified by law, and treat this requirement as they do other obligations against their respective institutions. But there are other banks that have been carelessly, if not willfully, habitually negligent in making their returns and paying the duty due from them to the Government. A number of the banks did not pay the duty due on the 1st day of July until some time during the months of September and October. The following banks, at the date hereof, have made no reports of the amounts of duty due from them on the 1st of July last, nor have they made any payment of the duty: First National Bank of Kansas City, Missouri; Miners' National Bank of Utah, Salt Lake City, Utah; First National Bank of Utah, Salt Lake City, Utah. The two last-named banks have recently been merged into one institution.

For the protection of the Treasury against the growing evil, I would most respectfully renew the recommendation made in my last annual

report, that a percentage upon such duty be added to it for every ten days' delay in payment after the expiration of the one month's time now allowed by law. Legal enactments, giving authority to this Office to add one per cent. to the duty due from banks for every ten days' delay after the time fixed by law for its payment, would seem to be the most effective measure to insure prompt payments of the duty.

#### "GOLDEN RULE" LOSS.

My attention has been called to a New York newspaper article, extending through five solid columns of *The Sun* of August 23, 1871. The authors have displayed much ingenuity in the relation of the story to weave such a fabric of fiction that it should seem to be truth.

The false theory attempted to be proved by this article is, that the steamer "*Golden Rule*," with *six hundred and eighty souls on board*, and carrying money belonging to the Treasury of the United States, *in transitu* from the Treasury at Washington to the assistant treasurer at San Francisco, was, on June 30, 1865, *at 3.40 in the night, during thick weather*, purposely run on the Roncador Reef, with a view to the robbery of the money, and that a million dollars in amount was actually stolen by the captain of the steamer and another party named; that the safe was recovered broken open; that it was forwarded by one of the parties in charge of the money to Washington, but that it never reached its destination, being thrown overboard on the way.

Without discussing the probability of two men conspiring, for the purpose of a possible gain, to run the vessel on a reef in the open Caribbean Sea, in the night-time, thereby endangering their own lives and those of nearly seven hundred other persons, many of whom were women and children; and without going into the testimony presented soon after the loss to the Department, that made it appear pretty clearly that the running of the vessel on the reef was purely accidental, and that the money was lost in the ocean, I hope now, in a simple statement, to overthrow every false inference drawn from the long circumstantial statements that are presented to prove that the amount of a million of dollars was stolen, and that it was not lost and totally destroyed in and by the action of the ocean.

First, then, the crushed safe did come to the Treasury and was repeatedly examined by myself and others, in company with old sea-captains and other experts, and it was the opinion of nearly all that the safe was broken by being jammed between the steamer and the rocks. Then, again, nearly all the money that was in the safe, except the million dollars in question, floated on shore, and, except a few bills, has been recovered by the Treasury. The million dollars was not in "greenbacks," as is alleged, but consisted of one thousand time-notes of one thousand dollars each, payable three years after date, with compound interest. These notes bore date May 15; were received by the Treasurer May 16; and left this office May 18. The "*Golden Rule*" left New York May 20, and was wrecked May 30, 1865. These notes were in regular and unbroken sequence of numbers, being from No. 5001, letter A, to 5500; and from No. 5001, letter B, to 5500, both numbers, in each case, inclusive. Both the numbers and letters appear on this kind of notes both on the upper and on the lower half of every note. Compound-interest notes were issued from Nos. 1 to Nos. 9850, repeated on each of the letters A, B, C, and D, aggregating \$39,400,000.

All this immense amount, except the one thousand notes in question, and seventeen other notes scattered promiscuously through the whole

series, have been presented at the Treasury, and have been paid. Not a single note of the one thousand notes of the numbers and letters above mentioned, that left this office for transportation to San Francisco, has ever been presented for payment. Of the thirty-eight thousand four hundred other notes of the same kind, that were issued at the same time, and before and after the time that the one thousand notes in question were issued, *all but seventeen notes have been redeemed*. The part of the story that this million of dollars was used by the alleged thieves, who, it is stated, were poor at the time of the wreck, are rich now, and in possession of valuable farms and stocks in the State of Maryland, is simply absurd. Had this property been bought with these notes, they would long since have been presented for payment.

A suggestion is thrown out that the numbers of the notes were changed, or rather that other notes, with other numbers, were exchanged for the notes in question by the collusion of the then Register of the Treasury with the thieves. Such a course would have been impracticable, if not impossible, and could have been of no earthly use to the supposed conspirators if it could have been done. The first note presented would have been detected, and that, too, whether the numbers were altered or not, or whether other notes with other numbers were put in their stead. If altered to or exchanged for a note of another number under 9850, the highest number issued, it would, of course, have been a *duplicate*, and there would have been no place for its register on the books. If changed to or for a higher number than the one named, it would have shown an *over-issue*, which it is now known does not exist. As no duplicate nor any number higher than 9850 has ever been presented, this false theory falls with the others. To show the utter impossibility of either being done, or that the notes in question were redeemed in any other way, it is only necessary to state, that all money, these notes included, is received from the Bureau of Engraving and Printing by the Treasurer, is receipted for by him, and is then covered into the Treasury by warrant. They can only be paid out on warrants. When redeemed by the Treasurer they are carefully counted, and then cut in two parts longitudinally, thus showing both the letters and numbers of the notes on each half. The lower halves are then sent to the office of the Secretary of the Treasury, and the upper halves to the office of the Register of the Treasury. In each of these offices they are counted; and if found to be correct and agreeing in all the offices, the Treasurer is then reimbursed for the amount by warrant in his favor.

In the offices of the Secretary and of the Register, books of registry for the entire issue of these compound-interest notes were prepared, having the letters and the numbers printed in regular sequence from the first to the last number that was ever issued. These half-notes, after being so counted in these two offices, are then registered respectively in these two separate books of registry. Neither of these offices knows of the other's action unless they disagree with the Treasurer's count. In such case each reports to the Treasurer separately. These two books of registry are now found to agree, and they both show that all the notes of this kind that have ever been issued, amounting to thirty-nine million four hundred thousand dollars, have been presented and paid, except the one thousand notes in question, and the seventeen other notes before mentioned, that have, as yet, not been presented for redemption. All the blanks opposite their appropriate letters and numbers respectively are filled up with the date on which each individual note was redeemed. The one thousand numbers representing the notes sent by the "Golden Rule" to San Francisco, running in their sequence

through quite a number of pages in the books, remain a blank on all the registers. After waiting over six years and not a single one of these known notes appearing, the Comptroller of the Treasury has, after a thorough and searching investigation, wisely directed to treat them like notes certified to have been destroyed, and has thus had them taken out of the cash account; and thus has most undoubtedly correctly settled this vexed matter forever, or until that time at least when one of these notes shall be resurrected from the grave where it has been buried for over six years.

#### OUTSTANDING LIABILITIES.

Governments, like individuals, should follow the golden rule, and do as they would be done by. Ours, of all others, being of the citizens, should set an example of honesty to the citizens. The withholding of an honest debt is morally but little, if any, better than outright stealing.

There is due from the Government money, in various amounts, to individuals, principally for unclaimed interest on United States stocks, that has been accumulating from year to year, until, in the aggregate, it amounts to quite a considerable sum. Formerly no employé of the Treasury Department was allowed to give any information that would lead to a demand for the payment of these debts. The consequence was that sharpers would, by some means, at times succeed in ascertaining some of the amounts, and the names of the persons to whom the money was due. If through city directories, or by any other means, they succeeded in ascertaining their post-office address, they would write to the parties direct; if not, then they would insert an advertisement in the "personal" of a New York newspaper, stating that "if the following-named persons will address C. A. B., box 6857, New York post office, stating where they may be found, they will learn something greatly to their pecuniary advantage;" after which follows a long list of names. These will be recognized in this office as creditors of the Government. If the creditor gets half the money due him from the Government he is lucky. Through these means the indebtedness of the Government for these unclaimed amounts has gradually decreased, but, instead of going to the persons to whom it belonged, half at least has gone into the pockets of sneaks, who obtained the information of the indebtedness surreptitiously.

Some three years since, with the consent of the then Secretary of the Treasury, I directed letters to be written to all persons having amounts standing to their credit on the books of this office, whose address could be ascertained, informing them of such fact, and the amount of money subject to their order. Comparatively but few were reached in this way, and very many of these amounts still remain unpaid. It is therefore recommended that Congress be asked to pass a law directing the Treasurer, or other proper officer of the Treasury Department, to advertise in newspapers published in the cities of New York and Washington, at the end of each year, a list of the names of all persons to whom the Government has been indebted for more than six months next preceding the making of such list, stating the amount of said indebtedness; and that lists of the same shall be posted in conspicuous places in the offices of the Treasurer and the Assistant Treasurers of the United States for public inspection. Provision should be made in the law for the retention of a percentage from the amount, when paid, to defray the expenses of advertising.

## AUDIT OF ACCOUNTS.

The lack, need, and want of a proper officer in the Treasury Department to review, adjust, and finally settle the agency accounts of the Treasurer and the Assistant Treasurers, and Designated Depositories, and of the Post Office accounts that are now finally passed upon by the Auditor of the Post Office Department, are seriously felt.

All other accounts, civil or military, or of whatever branch of the public service, are finally passed upon, adjusted, and settled by either the First or the Second Comptroller of the Treasury. Neither of the Comptrollers has any legal authority to review, decide upon, or in any manner control in the two kinds of accounts above named. The final settlement and the correct payment of these accounts should be under the supervision of a Comptroller, or other proper officer designated for that purpose. As matters now stand, in regard to the two classes of accounts named, this office is not only inconvenienced and imperiled, but it has great responsibilities thrown upon it that do not attach in other cases, and ought not in those named.

It is feared that through the loose, irregular, and anomalous manner in which these accounts are settled and paid, sooner or later, the Government will suffer serious losses. A loss to the Post Office Department some years since, supposed to have been caused by the collusion of the then postmaster in the city of New York and an officer of the Treasury Department, and the recent loss to the Government through an agency account, would probably have been avoided had there been a proper officer of the Treasury Department to review the adjustment and the settlement of these classes of accounts, and decide upon the sufficiency of the receipts given in payment therefor.

It is suggested that the office of a Third Comptroller be created, to take all these accounts and their final settlement in charge; or that they be given, like all other accounts, for adjustment, settlement, and evidence of correct payment of the draft or check issued thereon, in charge of one of the present Comptrollers of the Treasury.

## CONCLUSION.

Without the least intention or desire to throw blame upon any other officer, it is due to the officers of the Treasury that the emphatic declaration should be made, that for the defalcation of an officer belonging to another Department of the Government, neither this office, nor any one employed in it, is in any way responsible, as will be clearly made to appear, should a legal investigation of the whole matter, which is desired on my part, ever be made.

The fiscal year has ended without the loss of a single cent to the Treasury by the act, or by the negligence, of any employé in this office. For this and for other escapes from loss, I hope that I am truly thankful and grateful to that Power that has now again, as in the past, shielded me from personal harm, and the nation from consequent pecuniary loss.

I have the honor to be, very respectfully,

F. E. SPINNER,

*Treasurer of the United States.*

Hon. GEORGE S. BOUTWELL,

*Secretary of the Treasury.*

## REPORT OF THE REGISTER OF THE TREASURY.

## TREASURY DEPARTMENT,

*Register's Office, October 30, 1871.*

SIR: I have the honor to submit herewith my annual report of business transacted in this Bureau during the fiscal year ending June 30, 1871.

It will be observed that the amount of work performed in the various divisions does not differ widely from the amount performed in the previous year, and the clerical force will average about the same throughout the year.

The refunding of a part of the public debt has added to the labor of the loan branch, and should success continue to attend your efforts to accomplish that purpose, I shall be under the necessity of asking for an increase of clerks in that division of this office.

It affords me pleasure to bear testimony to the general good conduct and efficiency of those who are employed in the public service in this Bureau.

The chiefs of division, and the general organization of the office, remain the same as at the date of my last annual report.

The report of business transacted is submitted under the different divisions into which the office is divided.

## DIVISION OF RECEIPTS AND EXPENDITURES.

The work of this division has been materially increased by the act of July 12, 1870, which provides that unexpended balances of annual appropriations shall only be applied to the payment of expenses properly made within the year, as it necessitates a duplication of accounts on both the personal and appropriation ledgers in all cases, except the appropriation be permanent or indefinite.

The following statement exhibits the work of the division for the year:

The number of warrants issued during the year for civil, diplomatic, miscellaneous, internal revenue, and public debt expenditures, was.....	19, 032
In the preceding year.....	17, 679
Increase .....	1, 353
The number of warrants issued for receipts from customs, lands, direct tax, internal revenue, and miscellaneous sources, was.....	10, 024
In the preceding year .....	9, 561
Increase .....	463
The number of warrants issued for payments and repayments in the War, Navy, and Interior (Pension and Indian) Departments, was.....	7, 977
In the preceding year.....	9, 927
Decrease.....	1, 950
The number of journal pages required for the entry of accounts relating to the civil, diplomatic, internal revenue, miscellaneous, and public debt receipts and expenditures, was.....	4, 027
In the preceding year.....	4, 017
Increase .....	10
The number of drafts registered was .....	29, 186
In the preceding year.....	29, 735
Decrease.....	549

The number of certificates furnished for the settlements of accounts was .....	9,537
In the preceding year.....	6,814
Increase .....	2,723
The number of accounts received from the offices of the First and Fifth Auditors, and Commissioner of the General Land Office, was .....	20,984
In the preceding year.....	20,775
Increase .....	209

The work of compiling the receipts and expenditures of the Government is being kept up as far as the settlement of the public accounts will permit. The manuscript for the fiscal year ending June 30, 1869, will be ready for the printer by the 1st of December next.

A large proportion of the duties of this division consists in furnishing information, and preparing statements and reports on calls made from your office and the several Bureaus of the Departments, and from Congress.

## NOTE AND COUPON DIVISION.

The following is a detailed statement of the work performed in this division during the fiscal year, viz :

Of United States Treasury notes (upper halves) there were counted, assorted, arranged, registered, and examined as follows, viz :

	Notes.	Value.
One-year 5 per cent. Treasury notes :		
Act March 3, 1863 .....	1,640	\$32,310
Two-year 5 per cent. Treasury notes :		
Act March 3, 1863 .....	185	11,900
Two-year 5 per cent. "coupon" Treasury notes :		
Act March 3, 1863 .....	30	3,750
Total number 5 per cent. Treasury notes .....	1,855	47,960
Coupons attached .....	27	
Three-year compound-interest notes :		
Act March 3, 1863 .....	311	13,000
Act June 30, 1864 .....	11,140	1,304,380
Total compound-interest notes .....	11,451	1,317,380

## Gold certificates:

Act March 3, 1863, 29,913 certificates..... \$74,512,000

The whole number of notes and certificates received during the year was 43,219, amounting to \$75,877,340.

The whole number of five and six per cent. interest notes (whole) received from the Comptroller, counted, verified, and delivered to the United States Treasurer, was 12,305, amounting to \$365,350.

Of United States seven-thirty coupon Treasury notes there were received, counted, assorted, arranged, registered, examined, and compared, as follows, viz :

	Coupons.	Notes.	Value.
Act July 17, 1861 .....	....	49	\$6,500
Act June 30, 1864, and March 3, 1865 :			
First series, August 15, 1864 .....		464	43,100
Coupons attached .....	312		
Second series, June 15, 1865 .....		373	44,450
Coupons attached .....	196		
Third series, July 15, 1865 .....		1,003	95,500
Coupons attached .....	564		
Total seven-thirty notes .....	1,071	1,457	149,550

The whole number of seven-thirty coupon Treasury notes received during the year was 1,889, amounting to \$189,550, with 1,071 coupons attached, the same having been arranged, registered, examined, and compared with the records of the division, properly filed, and deposited in a files-room.

The total number of coupons of the various loans counted, assorted, and arranged numerically, was 4,283,704.

The total number of coupons registered was 5,087,608.

The total number of coupons examined and compared was 10,597,947.

All the redeemed coupons are received in this division, requiring a large portion of the clerical force to complete the necessary arrangements for their final disposition. After being registered and carefully compared, they are packed in boxes, which are labeled, designating the number, denomination, and kind of coupons. A schedule of the coupons, by report, is prepared, designating the number of each denomination, loan, when due, the amount of each, and the aggregate of the whole.

The number of exchanged and redeemed bonds received, scheduled, entered in blotters, and registered upon the numerical records, was as follows, viz :

Of the loan of July 17 and August 5, 1861, 9,809 bonds, amounting to \$6,081,150, with 219,948 coupons attached, amounting to \$4,097,511.

Of the loan of June 30, 1864, 21,229 bonds, amounting to \$15,329,750, with 636,796 coupons attached, amounting to \$13,818,184 50.

Of the loan of March 3, 1865, 5,964 bonds, amounting to \$3,578,300, with 187,667 coupons attached, amounting to \$3,374,368 50.

Of the consols of 1865, 109,481 bonds, amounting to \$60,787,350, with 3,283,808 coupons attached, amounting to \$54,869,040.

Of the consols of 1867, 45,589 bonds, amounting to \$7,304,450, with 1,551,123 coupons attached, amounting to \$7,452,072.

These bonds, after a careful examination and comparison with the records, are delivered to a committee authorized to receive them for destruction.

#### LOAN DIVISION.

The total amount of coupon and registered bonds issued during the year was \$213,842,586 41. The number of bonds was 61,233.

The amount of bonds redeemed, as shown by the books of this office, was.....	\$216,520,312 41
Including amount which, in process of auditing and settling the accounts, had not reached this office at the close of the fiscal year....	63,179,450 00
Exchanges.....	49,807,300 00
Transfers.....	96,572,362 00
Making total amount canceled.....	<u>426,079,424 41</u>

The following statement shows the number of cases, number and amount of registered and coupon bonds issued and canceled during the fiscal year :



Statement showing the number of cases and number and amount of registered and coupon bonds issued and canceled during the fiscal year ending June 30, 1911.

LOANS.	DIRECT ISSUES.				EXCHANGE.				TRANSFER.				TOTAL ISSUES.
	No. of cases.	Bonds issued.	Amount.	No. of cases.	Bonds issued.	Amount.	No. of cases.	Bonds issued.	Amount.	No. of cases.	Bonds issued.	Amount.	
1847.....													
1848.....													
1849.....													
1850, Texas indemnity.....				13	159	\$705,000 00	30	197	\$1,437,000 00			\$2,222,000 00	
1851.....				1	1	1,000 00	11	28	121,000 00			122,000 00	
1852, February 8.....				83	160	327,000 00	117	423	1,284,000 00			1,611,000 00	
1853, Oregon war.....							6	48	94,000 00			94,000 00	
1854, July 17.....				451	1,734	5,377,850 00	720	9,341	6,032,800 00			12,350,650 00	
1855.....				150	419	1,152,000 00	671	3,474	13,023,200 00			14,243,200 00	
1856.....				944	720	1,691,150 00	265	1,086	3,128,050 00			4,841,200 00	
1857, 5 30's.....							18	49	140,050 00			140,050 00	
1858, 10 40's.....				445	1,010	7,011,000 00	805	9,907	11,250,950 00			19,172,550 00	
1859, June 30.....				130	467	1,977,050 00	307	1,373	5,782,850 00			7,759,900 00	
1860.....				115	490	5,064,100 00	340	9,271	7,641,950 00			12,706,050 00	
1861, Canada of 1865.....				480	1,890	7,985,750 00	880	4,275	14,814,000 00			22,819,750 00	
1862, Canada of 1867.....				815	3,230	14,538,300 00	1,243	4,963	14,222,150 00			28,760,450 00	
1863, Pacific Railroad.....				270	744	2,034,500 00	303	1,203	1,522,400 00			4,456,900 00	
1864, 100's.....							1,237	9,420	14,933,512 00			15,077,024 00	
1865, 100's, July 8.....												678,363 41	
1866, 100's, July 8.....												66,796,850 00	
1867, 100's, July 8.....													
1868, 100's, July 8.....													
1869, 100's, July 8.....													
1870, 100's, July 8.....													
1871, 100's, July 8.....													
1872, 100's, July 8.....													
1873, 100's, July 8.....													
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1905, 100's, July 8.....													
1906, 100's, July 8.....													
1907, 100's, July 8.....													
1908, 100's, July 8.....													
1909, 100's, July 8.....													
1910, 100's, July 8.....													
Grand total.....	843	121,015	\$7,453,994 41	3,928	11,753	\$40,807,300 00	7,082	90,475	\$6,572,369 00			\$13,842,566 41	

Statement showing the number of cases and amount of registered and coupon bonds, &amp;c.—Continued.

LOANS.	CANCELED.									
	REDEMPTIONS.			EXCHANGES.		TRANSFERS.		TOTAL CANCELED.		
	No. of cases.	Bonds canceled.	Amount.	No. of bonds.	Amount.	No. of bonds.	Amount.	Amount.	Amount.	
1847.....	1	1	\$1,000 00					\$1,000 00		
1848.....	1	25	10,800 00					10,800 00		
1850, Texan Indemnity.....										
1858.....				775	\$755,000 00	297	\$1,487,000 00	2,232,000 00		
1860.....				1	1,000 00	28	134,000 00	7,094,000 00		
1861, February 8.....	34	2,342	6,966,000 00	327	287,000 00	454	1,284,000 00	1,611,000 00		
Oregon war.....										
1861, July 17.....				8,268	5,377,850 00	2,979	6,102,800 00	12,230,650 00		
1862.....	146	8,768	28,384,100 00	2,616	1,152,000 00	5,638	13,082,300 00	42,619,300 00		
1863.....				2,554	1,601,150 00	1,164	3,154,050 00	4,849,200 00		
1864, 5-30's.....	16	207	837,400 00				146,000 00	1,039,400 00		
1864, 10-40's.....				13,866	7,911,060 00	4,062	11,269,950 00	19,172,520 00		
1864, June 30.....				11,120	27,113,390 00	1,771	5,782,850 00	34,873,260 00		
1865.....	110	10,529	24,725,450 00	6,257	5,064,100 00	2,622	7,643,950 00	37,433,500 00		
Consols of 1865.....				14,541	7,985,750 00	7,014	14,834,000 00	103,622,850 00		
Consols of 1867.....	111	44,891	80,303,400 00					74,114,150 00		
Consols of 1868.....	85	35,612	45,323,800 00	32,315	14,598,200 00	6,704	14,282,120 00	7,355,800 00		
Pacific Railroad.....	29	1,366	2,898,200 00	7,094	2,934,500 00			14,935,512 00		
Coupon, 1870, July 8.....						3,380	14,935,512 00	14,935,512 00		
Funded, 1881, 5 per cent.....	1	1	362 41					362 41		
Grand total.....	645	114,769	216,520,312 41	97	82,100 00	29	112,500 00	362,899,974 41		
Amount redeemed which had not reached Registrar's office.....			63,179,450 00	92,613	49,897,300 00	37,107	96,572,362 00			

## NOTE AND FRACTIONAL CURRENCY DIVISION.

The work of this division has materially increased during the last year, as will appear from the following statement showing the number of notes and amount of fractional currency, Treasury notes, and national bank notes (of such national banks as are broken or gone into voluntary liquidation) counted, examined, canceled, and destroyed, by burning, during the year, viz :

Denomination.	No. of notes.	Amount.
Fractional currency.....	400,000	\$62,000 00
Fractional currency, second issue.....	600,000	91,300 00
Fractional currency, third issue.....	20,824,000	5,072,100 00
Fractional currency, fourth issue.....	116,000,000	24,598,000 00
Legal-tender notes.....	12,677,376	114,127,390 00
Legal-tender notes, series 1869.....	1,163,405	2,076,170 00
National bank notes.....	994	8,360 10
Total.....	231,819	1,299,229 40
Total.....	132,837,601	147,334,359 40

*Discounted money record kept, but not counted, in this division.*

Fractional currency.....	\$974 83
Fractional currency, second issue.....	934 76
Fractional currency, third issue.....	88,720 77
Fractional currency, fourth issue.....	10,253 76
Legal-tender notes.....	190,948 35
Legal-tender notes, series 1869.....	17,608 15
Total.....	309,440 62

The number of notes counted this year was.....	152,837,601
The number of notes counted last year was.....	115,277,138

Showing an increase of.....	37,560,463
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The amount of the notes counted this year was.....	\$147,334,359 40
The amount of the notes counted last year was.....	118,116,960 50

Showing an increase of.....	29,217,398 90
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## TONNAGE DIVISION.

The tonnage of the country, as compared with that of 1870, is as follows :

	1870.		1871.	
	Vessels.	Tons.	Vessels.	Tons.
Registered, (foreign trade).....	2,942	1,516,809	2,721	1,425,148
Licensed and licensed, (home trade).....	26,656	2,729,708	26,930	2,657,465
Total.....	29,598	4,246,506	29,651	4,082,613

The tonnage in "home trade" has increased 126,622 tons, and the tonnage in "foreign trade" has fallen off 91,822 tons. Stated according to the various classes of vessels, the comparison is as follows:

	1870.		1871.	
	Vessels.	Tons.	Vessels.	Tons.
Sailing-vessels.....	17,534	2,363,086	17,298	2,246,153
Steam-vessels.....	3,524	1,075,095	3,567	1,067,637
Barges.....	1,530	240,411	1,472	260,343
Canal-boats.....	6,410	567,915	7,314	644,472
Total.....	28,998	4,246,507	29,651	4,222,607

Of the total steam tonnage of the country, amounting to 1,087,637 tons, only 5 per centum is regularly employed in foreign trade.

There appears to have been a total increase during the year ending June 30, 1871, of 604 vessels—34,800 tons.

The sailing tonnage has decreased 78,231 tons; the steam tonnage has increased 12,442 tons; the barge tonnage has increased 19,932 tons; and the canal tonnage has increased 80,557 tons.

#### SHIP-BUILDING.

The ship-building of the country, for 1870 and 1871, is as follows:

	1870.		1871.	
	Vessels.	Tons.	Vessels.	Tons.
Sailing-vessels.....	816	146,340	756	97,176
Steam-vessels.....	290	70,620	302	87,242
Barges.....	162	29,736	229	46,222
Canal-boats.....	350	30,256	468	41,346
Total.....	1,618	276,953	1,755	273,226

The total ship-building, during the year ending June 30, 1871, appears to have been 3,727 tons less than during the preceding year, but there have been 137 more vessels built. This is due to the falling off in the building of large vessels for the foreign trade, and to the increase in the building of barges and canal-boats.

There has been a great falling off in the building of sailing-vessels, and an increase in the building of steam-vessels. The steam tonnage built has been designed almost exclusively for "home trade."

The tonnage built within the limits of the various grand divisions into which the country is divided is as follows:

	TONNAGE BUILT.	
	1870.	1871.
Atlantic and Gulf Coast.....	170,116	150,843
Pacific Coast.....	12,730	3,923
Northern lakes.....	37,258	44,377
Western rivers.....	56,859	72,139

The iron ship-building of the country during the past year has been very small in comparison with the iron ship-building of England, which amounted to 256,824 tons in the year 1870. Yet there has been a larger tonnage built in this country than during any previous year, since the termination of the war, as shown by the following table:

*Iron vessels built in the United States from 1867 to 1871 inclusive.*

	TONNAGE BUILT.				
	1867.	1868.	1869.	1870.	1871.
Sailing vessels.....	None	None	1,039	679	2,067
Steam vessels.....	None	2,801	3,545	7,602	13,412
Total.....	None	2,801	4,584	8,281	15,479

The iron vessels built have been designed almost exclusively for home trade. There have been two iron steamers built on the lakes and four on the western rivers.

The superiority of iron over wood as a building material for steam-vessels seems to have been well established.

#### THE FISHERIES.

The number of vessels and tonnage engaged in the "cod and mackerel" and "whale fisheries" during the years 1868, 1869, 1870, and 1871 is as follows:

	1868.		1869.		1870.		1871.	
	Vessels.	Tons.	Vessels.	Tons.	Vessels.	Tons.	Vessels.	Tons.
Cod and mackerel fisheries.....	2,220	83,886	1,714	62,704	2,292	91,460	2,495	92,453
Whale fisheries.....	322	71,343	311	70,302	299	67,954	249	61,480

Our cod and mackerel fisheries exhibit a fair degree of prosperity, the tonnage thus employed being larger than during any year since the repeal of the bounty on the cod-fishery act of July 28, 1866, and in lieu thereof the substitution of a drawback on imported salt used in curing both mackerel and cod-fish.

The following statement exhibits the tonnage employed in the cod and mackerel fisheries belonging in each State:

State.	Tons.	Per cent.
Maine.....	63,779	67.9
Mass.....	22,150	23
New Brunswick.....	3,567	3.8
New York.....	1,820	2
New Hampshire.....	934	1
Island.....	40	0.4
Total.....	92,666	100

The district of Gloucester is most extensively engaged in this occupation; her cod and mackerel fleet amounting to 548 vessels, 28,569 tons, showing an increase of 97 vessels, 5,093 tons, since June 30, 1870.

There appears to be a gradual decline in our tonnage employed in the whale-fishery. The entire whaling tonnage of the country is owned at the following ports:

Ports.	Vessels.	Tons.
New Bedford.....	187	51,442
New London.....	22	3,777
Barnstable.....	20	1,339
Edgarton.....	5	1,754
Salem and Beverly.....	5	755
Nantucket.....	5	729
San Francisco.....	3	602
Sag Harbor, N. Y.....	2	261
Total.....	249	61,429

It appears that 84 per cent. of the total tonnage employed in whale-fishery hails from New Bedford.

#### REVISION OF THE LAWS RELATING TO THE REGISTRATION, ENROLLMENT, AND LICENSING OF VESSELS.

Our registration and enrollment laws now in force are substantially the enactments of December 31, 1792, and February 28, 1793. It seems to be very desirable that certain changes should be introduced, both in regard to the method of documenting vessels and in the forms of our records of title. Great improvements can also be made in the manner of keeping marine accounts and transmitting returns of the same to this Department, thus enabling us to preserve more accurately the distinctions as to customs districts, and also as to the home and foreign trade.

#### BOOKS AND BLANKS.

During the year ending June 30, 1871, there were issued from this office to collectors of customs, upon requisitions, 1,404 blank-books and 118,159 blank forms. There were received from the Congressional Printer 1,130 books and 78,000 blank forms.

The plan of furnishing these supplies to the custom-houses of the country from this office has proved to be highly successful both as a measure of economy and as a means of securing uniformity in the work at the custom-house and in the returns made to the office.

During the past year complete lists have been made of all the documented vessels of the United States, referring to the records of this Bureau. This has been found to be a practical necessity of the current work.

An alphabetical list of the ports of entry, ports of delivery, and hailing ports of vessels has also been prepared, showing the State and customs district in which each port is situated, together with a full geographical description of the limits of each port and district.

I remain, with great respect, yours, &c.,

JOHN ALLISON,  
*Register.*

Hon. GEORGE S. BOUTWELL,  
*Secretary of the Treasury.*

## REPORT OF SUPERVISING ARCHITECT OF THE TREASURY.

TREASURY DEPARTMENT,  
OFFICE OF THE SUPERVISING ARCHITECT,  
November 17, 1871.

SIR: I have the honor to submit the following report of the progress of the various works, with the construction, repair, or improvement of which this office has been charged, and also of the condition of the public property under its supervision, together with some recommendations in regard thereto.

Since the date of my last report, the only new buildings that have been commenced are the court-house and post-office at Columbia, South Carolina, and the custom house and post-office at Machias, Maine. Work has been resumed on the custom-house at New Orleans, Louisiana, St. Paul, Minnesota, and the marine hospital at Chicago, Illinois, and has been continued on the custom-houses at Charleston, South Carolina; Knoxville, Tennessee; Cairo, Illinois; Omaha, Nebraska; Portland and Astoria, Oregon; the branch mint at San Francisco, California; the court house and post-office at New York, and the post-office and treasury building at Boston, Massachusetts.

The custom-house at Portland, Maine; the court-houses and post-offices at Des Moines, Iowa; Portland, Maine; and Madison, Wisconsin; appraiser's stores at Philadelphia, Pennsylvania; and the assay office at Boise City, Idaho, have been completed, furnished, and are now occupied. The custom-houses at Alexandria, Virginia; Detroit, Michigan; New Bedford and Newburyport, Massachusetts; Newark, New Jersey; Portsmouth, New Hampshire; and the court-houses and post-offices at Windsor and Rutland, Vermont; and the marine hospital at Chelsea, Massachusetts, have been thoroughly repaired and remodeled, and are now in good condition. The old custom-house at Charleston, South Carolina, for the repair of which a special appropriation was made, has been refitted, and is now occupied. The addition to, and the remodeling of the custom-house and post-office at Baltimore, Maryland, is now in progress. Repairs, more or less, have been made on the following buildings, viz: Marine hospitals at Key West, Florida, and St. Louis, Missouri; and the custom-houses at Bath and Bangor, Maine; Boston and Barnstable, Massachusetts; Buffalo, New York; Cleveland, Ohio; Eastport, Maine; San Francisco, California; Cincinnati, Ohio; Erie, Pennsylvania; Galveston, Texas; Mobile, Alabama; New York, New York; Norfolk, Virginia; Oswego, New York; Pensacola, Florida; Pittsburgh, Pennsylvania; Philadelphia, Pennsylvania; Providence, Rhode Island; St. Louis, Missouri; Wilmington, North Carolina; the court-houses and post-offices at Boston, Massachusetts; Indianapolis, Indiana; New York, New York; and the marine hospitals at Cleveland, Ohio; Detroit, Michigan; and Portland, Maine.

The following appropriation was made at the last session of Congress, viz:

That the Secretary of the Treasury be, and he is hereby, authorized and directed to cause to be constructed a suitable building, fire-proof, at Trenton, New Jersey, for the accommodation of the post-office, United States circuit and district courts, pension, and internal revenue officers; and for this purpose there is hereby appropriated, out of any money in the Treasury not otherwise appropriated, one hundred thousand dollars, to be expended under the direction of the Secretary of the Treasury, who shall cause proper plans and estimates to be made, so that no expenditure shall be made or authorized for the full completion of said building beyond the amount herein appropriated.

Under the authority conferred by this act, offers of sites for the build-

ing were solicited by advertisement. After a full examination, it was found that a suitable lot could not be obtained for less than \$45,000. As the appropriation expressly stipulated that no expenditure should be made or authorized for the full completion of the building beyond the sum of \$100,000, and as it was so manifestly impossible to erect such a building as the act required for \$55,000, (the balance that would remain after paying for the site,) no further action could be taken by the Department, even payment of the bills for advertising being estopped by the provisions of the act itself, they are still unpaid. This result was anticipated by this office, and vindicates the opinions uniformly expressed by me, that the building could not be erected for the sum it was proposed to appropriate. In this connection I desire to again call attention to the fact that it is impossible to reduce the cost of work below its intrinsic value by limitations on appropriations. Such limitations operate, as in the present instance, as a practical repeal of the appropriation, if respected, or in applications for deficiencies if ignored or evaded. No other result ever has been or ever can be obtained. If it were possible to reduce the market value of labor and materials by legislation, the object sought for could undoubtedly be attained, but not otherwise.

I would also, in this connection, call attention to the appropriation for the construction of the court-house and post-office at Columbia, South Carolina. An appropriation of \$75,000 was made on the 3d of March, 1869, for the commencement of work without any other limitation than that a suitable site should be given by the citizens. Under this authority plans were prepared and approved by the Secretary of the Treasury, Secretary of the Interior, and Postmaster General, as required by law, for a building, the estimated cost of which was \$285,161. This appropriation was afterward carried to the surplus fund under the operation of the act of July 5, 1870, in regard to unexpended balances. The following appropriation was subsequently made, viz:

That the appropriation made March 3, 1869, having been covered into the Treasury, the Secretary of the Treasury be, and he is hereby, authorized and directed to cause to be constructed upon the site already given to and owned by the United States, a suitable building, fire-proof, at Columbia, South Carolina, for the accommodation of the post-office and United States circuit and district courts; and for this purpose there is hereby appropriated out of any money in the Treasury, not otherwise appropriated, seventy-five thousand dollars, to be expended under the direction of the Secretary of the Treasury, who shall cause proper plans and estimates to be made, so that no expenditure shall be made or authorized for the full completion of said building beyond the amount herein appropriated.

The original plans contemplated a first-class granite building, three stories in height. These plans have been necessarily abandoned, and the foundation laid for a plain brick building of the same general ground-plan and dimensions, though but two stories in height, and which will be entirely inadequate for the accommodation of the officers for whose use it is intended, for the proper transaction of the public business, and unsatisfactory to the citizens of Columbia, who gave the property under the assurance that a suitable edifice would be erected; and it will be not only discreditable in itself as a Government building, but conspicuously so, in comparison with the magnificent though unfinished State-house in its immediate vicinity. I cannot too strongly recommend the repeal of the limitation on the cost of this building before the completion of the foundation.

The custom-house at Machias, Maine, will be completed within the amount of the appropriation, but by diminishing the durability of the structure, a light galvanized iron cornice and tin roof having been



substituted for the granite cornice and slate roof contemplated by the original design. This saving has been made at the expense of true economy, and with the certainty that both roof and cornice will need renewal within a comparatively short time.

No action has been taken in regard to the new custom-house, court-house, and post-office at St. Louis, Missouri, for which an appropriation of \$200,000 was made July 15, 1870, and renewed on April 20, 1871, that sum being entirely insufficient for the purpose. The building now occupied was erected at a time when labor and material were much cheaper than at present, and cost \$321,987 08; it is entirely too small, is cheaply and poorly constructed, and is in every way unsuitable for the wants of the Government, as I have reported heretofore. To erect a building within the limit of the present appropriation would be but a waste of money. A new building is undoubtedly needed at St. Louis, but should not be commenced unless the Government can afford to spend the amount necessary to produce the proper result.

The work on the custom-house at St. Paul, Minnesota, which was suspended by the limitations placed on the cost of the building in the act of April 20, 1870, has been resumed, (the limitation having been repealed by the act of March 3, 1871,) and is now well advanced. The progress has been, on the whole, satisfactory; the work is of superior quality; and the cost has been less than the amount of any responsible proposal that could be obtained under advertisement. It is expected that the building will be inclosed during the present season, and be completed at an early date, and within the amount of the appropriation. This building would have been finished and occupied during the present year but for the legislation referred to. Charges were made by one Thomas M. Newson, who alleged that the contract for granite had been awarded without competition, and at extravagant rates, and that he, Newson, was both able and willing to furnish granite of equal quality, at much lower prices than were paid the contractor, viz. 65 cents per cubic foot, delivered at the site of the building without any allowances whatever. Although these charges were fully investigated by a committee of Congress, of which Hon. J. C. Churchill was chairman, and although their report entirely vindicated the action of this office, it is gratifying to be able to state that the report is also fully sustained, under oath, by no less a person than Mr. Newson himself, who, since that date, entered into a contract for granite with the Light-House Board, giving bond for the faithful performance thereof, which he subsequently declared, under oath, he was unable to fulfill, though awarded to him at much higher rates than those paid by this office. In his affidavit he states that he had no quarry, but owned land on which granite existed in large quantities and from which he expected to obtain it with very little expense of stripping or cost of opening; that, upon trial and working, the rock on the outside of the quarry proved fractious, and that every piece was spoiled by splitting; that after the quarry was fully opened he found it impossible to quarry stone for less than one dollar per foot; that he had entered into a contract to furnish and deliver at \$1 25 per foot; but that, so delivered, its net cost to him would be \$2 10 per foot; that to comply with his contract would involve a loss of \$23,000, which would be ruinous to himself and others, and that he based his bid on the opinion of other persons, having himself no knowledge of the business.

This case is worthy of record as a specimen of the kind of evidence on which the charges against the management of this office have been based, and as an illustration of the correctness of the statement made

in my last report, "That bonds are unnecessary in contracting with honorable and responsible men, and utterly worthless as a protection against rogues and shysters; thus placing the honest, *bona fide* bidder at the mercy of the dishonest and irresponsible one."

Work on the marine hospital at Chicago, Illinois, which was suspended at the same time and under the same conditions as at St. Paul, was resumed early last spring. It has been pushed forward with great energy, and will be finished at an early day, and would have been completed within the amount of the original estimates and the limitations of law but for the damage done to the building during the suspension of the work and the loss of material and increase in prices caused by the late fire, which the superintendent estimates at \$14,060 50. The only result attained by the suspension of work on these buildings has been the complete vindication of this office against the charges made, a demonstration that its estimates were correct and its prices low, and a direct increase in cost to the Government.

In my last report I expressed the opinion that no expenditure on the custom-house at New Orleans, Louisiana, could make it a suitable, convenient, or creditable building. Since then much labor and time have been expended in the preparation of plans for its completion. It gives me great pleasure to report that the work of completing it is progressing in a satisfactory manner, and that alterations and improvements have been made that, while materially reducing the cost of finishing the building, have at the same time greatly increased its convenience, and they certainly do not detract from, if they do not improve, its external appearance. The first or basement story is now nearly completed. As the business of the port is steadily increasing, I would strongly recommend that an appropriation for the completion of the building be made without any further delay. It will, when finished, though devoid of beauty, be a permanent and substantial structure, and will accommodate all the branches of the public service.

The progress of work on the court-house and post-office in New York City has been not only gratifying but its cost has been kept within the amount of the estimates. The first story is now nearly completed. An idea of the immense amount of work that has been done may be formed from the following statement of materials used, and labor expended, to the present time, viz: 2,476,960 bricks; 15,701 barrels cement; 144,087 feet cube granite; 2,689 yards rubble masonry; 5,206,443 pounds of wrought and cast iron. And the magnitude of the undertaking, from the fact that there are now engaged at Dix Island 1,002 persons in the preparation of the granite alone, of whom 704 are employed in cutting the granite for the Government, and 298 in quarrying the stock and otherwise for the contractors. Three hundred and twenty-seven thousand one hundred and sixty-nine and one-half days' labor have already been expended in cutting and boxing the granite after it has been quarried; and it is estimated that three hundred thousand days' labor will be required to complete that branch of the work alone. The fidelity and capacity that have been exhibited by the superintendent, the Hon. Calvin T. Hulburd, cannot be overestimated or too highly praised. I see no reason whatever to doubt that the building will be completed within the limit fixed by law.

The nature of the soil required that the foundations for the New York post-office should be laid at a depth of 33 feet below the level of the sidewalk, and that sheet-piling should be used to the entire depth, while at Boston the same result was attained at a depth of 19 feet, and without any unusual precautions. The latter building is therefore much

further advanced than the former, the second story being nearly completed. The progress of this work is highly gratifying to the Department, and in the highest degree creditable to the superintendent, Gridley J. F. Bryant, esq., though he has been considerably delayed by the legal proceedings referred to in my last report, which were found necessary to procure the additional property required, the lot originally purchased being inadequate for the site of the building. These questions have, however, been satisfactorily adjusted by the condemnation of the property at its appraised value, under a special act of the State of Massachusetts, all other attempts to procure the property at a fair price having failed. For this result the Government is mainly indebted to the untiring energy and perseverance of the postmaster, Gen. W. L. Burt. No further delay in the prosecution of the work is anticipated; and should the expectations of this office be realized, the building will be ready for occupancy by the Post-Office Department during the summer of 1872.

The progress of the work on the branch mint at San Francisco, California, has been satisfactory, and it will, unless any unforeseen obstacle should occur, be completed during the ensuing season. The estimates for this building, as for all others on the Pacific coast, were prepared on the basis of disbursements in coin. The Department having, however, decided that all payments must be made in currency, the amount of the appropriation must be increased accordingly. With this addition, the estimates will, it is believed, be found correct, and the work be finished at an early day, and as soon as the necessary machinery for the building can be completed, for which an appropriation must be obtained. This building has been designed as an earthquake-proof as well as fire-proof structure, and no pains spared to make it as permanent and substantial as possible. It is believed that success has been attained. The management of the superintendent, W. P. C. Stebbins, esq., has been highly creditable to him, and satisfactory to the Department.

The management and progress of the work on the custom-house at Astoria, Oregon, have been satisfactory; and had a sufficient appropriation been made, the building could have been inclosed during the past season. The cost of the work has been materially reduced, and, should no unforeseen difficulty occur, it will be finished for \$10,000 less than originally estimated.

The progress of the work on the custom house at Portland, Oregon, has been unsatisfactory, great trouble having been experienced in obtaining a contractor, the contractor being unable to fulfill his contract within the time specified, being neither conversant with the business nor possessed of the necessary capital to prosecute the work in a proper manner. The result is a fair illustration of the results of awarding contracts to the lowest bidder, irrespective of their ability. These difficulties have been in part, at least, overcome, and there is no good reason why the building should not be completed at an early day.

Great difficulty has been experienced in obtaining the services of competent mechanics at Knoxville, Tennessee, and considerable annoyance and embarrassment has been thereby caused to the Department. The trouble of which the exterior of the building is erected justifies the expectations formed in regard to it, both as regards quality and cost. The building will be, when completed, one of the most substantial and permanent owned by the Government.

Work on the custom house at Omaha, Nebraska, is progressing as rapidly as the limited appropriation permits, the first story being nearly completed. In this connection I desire to call attention to the impossi-

bility of completing the building within the amount of appropriation, according to the original plans, which contemplated a three-story building, with an attic, and which were prepared under the direction of, and approved by, the Secretary of the Treasury, Secretary of the Interior, and Postmaster General, in accordance with law. The restrictions subsequently imposed will compel the completion of the building as a two-story structure. This will not furnish sufficient room for the proper transaction of the public business, and will necessitate an extension at no distant day, and at a greatly increased cost. It is not probable that another public building will be needed in the State of Nebraska for many years to come, and I cannot too urgently recommend that the present building should be constructed of sufficient capacity to meet the wants of the public service.

The resumption of work on the custom-house at Charleston, South Carolina, has proved an undertaking of unusual difficulty, many of the plans having been destroyed during the war, as well as a large portion of the valuable material that was intended for its construction. A large amount of marble work, some completed, and the remainder in various stages of completion, was stored on the premises and at the quarry at Hastings, New York. Much of it was seriously damaged and has required great care and judgment to utilize it, for which the superintendent is entitled to great credit. The quarry from which it was taken was abandoned some years since and subsequently filled up. The cost of reopening it being considered too great to warrant the expenditure, the building will be completed with marble from the quarries at Tuckahoe, New Jersey, the material being of the same character, and so nearly identical that it is believed that the change cannot be detected. The former contract for the supply of marble being unsatisfactory to the Department, it gives me great pleasure to report that the contractor, Edward Learned, jr., esq., has surrendered the same, and is now furnishing the material upon conditions that are entirely satisfactory to the Government. The plans under which the building is now being constructed will, it is estimated, reduce the cost of completion \$470,374 99, without detriment to its appearance, capacity, or convenience. The expenditures on this building prior to the war can be fitly characterized by the epithet of reckless extravagance, the workmanship, though fine, being apparently designed as a mere excuse for the expenditure of money. It may be worthy of remark that the management of this building, like the Boston and New Orleans custom-houses, was under a special commission.

The extension of the custom-house at Baltimore, Maryland, in order to provide accommodation for the post-office in that city, was authorized by the act of July 15, 1870, which appropriated \$20,000 for the purpose. This extension is now nearly completed and will be a great improvement to the building and a relief to the over-crowded employes. The great increase of the Government business in this city demanded still further relief; it was therefore determined to utilize the large and beautiful rotunda of the building, heretofore vacant, by fitting it for customs purposes. Offices for the use of the assistant treasurer are now in course of preparation, and fire and burglar-proof vaults are now being constructed. Plans for the permanent improvement of the building have been prepared, which, if carried out, will, it is believed, provide all the accommodation that will ever be required by the Government in that city, as well as a handsome and convenient building. I strongly recommend that the necessary appropriation be obtained and the work completed as soon as practicable. I also renew the recom-

mentation contained in my last report in regard to the purchase of the Merchants' Bank property, if it can be obtained at a fair price.

I desire you to renew the recommendations contained in former reports in regard to the unfinished marine hospital at New Orleans, Louisiana. It is situated in one of the most unsuitable and unhealthy localities that could have been selected. It was, when purchased, a palmetto swamp, and, though it has been since partially drained, is much more suitable for cemetery than hospital purposes. The building is an immense structure of cast iron, and has already cost \$528,134 34. The lowest estimate of the cost of completion that can fairly be made is \$200,000. A fine and convenient pavilion hospital of ample size could be erected for a sum not to exceed \$75,000, exclusive of the site, which should be situated on the banks of the river, either immediately above or below the city. In my last report I recommended the transfer of Sedgwick Hospital to the marine hospital establishment, it being no longer needed for military purposes. No action having been taken by Congress, this fine and admirably arranged establishment, which cost the Government upward of \$400,000, and which was in good condition, was sold at public auction and realized but the nominal sum of \$9,305 75, the land on which it was erected being held on a lease, and not owned by the Government. The material in the present hospital building is valuable, and though it is yearly depreciating from neglect and decay, could undoubtedly be sold for enough to erect a suitable and commodious pavilion hospital, thereby effecting a direct saving of not less than \$200,000. I strongly recommend that authority be obtained to dispose of the building and land, either together or separately, and to purchase a new site and erect a suitable building with the proceeds.

Sealed proposals for the wreck of the marine hospital at San Francisco, which has been vacant since the earthquake of October, 1868, were invited by public advertisement. The highest offer that was obtained was but \$1,560 coin. This result being unsatisfactory, all the bids were rejected, and the superintendent of the new mint in that city directed a careful examination of the building, and an estimate of the value of the material it contained, with a view to wrecking the building and disposing of the material. The result of his investigation being unsatisfactory, no further action has been taken. Considerable and unfavorable comment has been elicited at the low price offered for the old material contained in this wreck. It was not, however, entirely unexpected to me, though considerably below my estimate of its value, the bricks of which it was constructed being, as I have previously reported, of little or no value, being made with salt water, and imperfectly burned. The result fully vindicates the opinion expressed of the worthless character of the structure and the inexpediency of making any further repairs upon it. I desire to renew my recommendations in regard to the erection of a pavilion hospital on one of the Government reservations near the city, to be selected hereafter. Plans have been prepared that will afford ample and excellent accommodation at a total cost of \$58,789 56, to which sum the expenditure may be safely restricted.

The marine hospital building at Pittsburgh is in bad condition, and needs a much larger expenditure for repairs and improvements than is, in my opinion, justified by the value of the building. Since it was erected the property immediately adjoining has been occupied by iron-works, which, while increasing the intrinsic value of the property, have injured it materially for hospital purposes. The supervising surgeon recommends the sale of the property, the purchase of a more eligible

site, and the erection thereon of a hospital on the pavilion system. I fully concur in this opinion, for economical as well as sanitary reasons, and feel confident that a suitable site and a convenient and satisfactory building can be purchased and erected for the value of the present property, thus saving the entire cost of the necessary repairs, which are estimated at upwards of \$25,000. I also desire to renew my recommendation that the smaller marine hospitals be disposed of, and that hospitals be maintained by the Government at the principal ports only. Most of the buildings now owned by the Government were constructed at a time when little knowledge existed, and less attention was paid to sanitary construction. They were also, as a rule, cheaply constructed, and badly planned. As a consequence they are in constant need of repairs, and are, at the best, unsatisfactory and unsuitable structures. The practice of leasing is not satisfactory in the results to the buildings, and greatly increases the amount of cost for repairs. I believe the interests of the Government will be better subserved by the sale of those that are not of sufficient importance to warrant their management by the Department.

The opinions expressed in the following extract from my report of September 30, 1866, viz, "I regret to report that the custom-house building at Portland, Maine, which has been considered strictly fire-proof, was irreparably injured by the disastrous conflagration in that city, and must be rebuilt from the foundation-walls. The total destruction of its contents was only prevented by the strenuous efforts of some persons who were overtaken by the fire, and were unable to leave the building, where they barely escaped with their lives. The experience in this case has proved conclusively that stone and iron structures, however carefully constructed, offer no successful resistance to a large conflagration, and that all Government buildings should be isolated by wide streets or open spaces," have been fully sustained by the results of the late disastrous fire in Chicago. The custom-house in that city was situated on the southwest corner of Dearborn and Monroe streets, the former of which is eighty and the latter sixty-six feet in width. Its west façade, however, faced Lombard block, which was a fine structure, five stories in height, rising from fifteen to twenty feet above the top of the custom-house, from which it was separated by a narrow street only twenty-seven feet wide. The immediate cause of the destruction of the custom-house was the burning of this block, the flames from which, driven, by the fierce southwest gale prevailing at the time, against the walls of the building, soon destroyed the stonework, warped the iron-work and shutters of the windows from their fastenings, and gave the flames free access to the interior.

The requirements of the Post-Office Department, for whose use the first story of the building was designed, made it necessary to carry the entire interior on cast-iron columns, which, of course, soon yielded to the heat and precipitated the upper floors into the cellar. It has been supposed that the destruction of the column was caused by the heat evolved from the burning furniture in the post-office. This, I am am satisfied, from a personal examination, was not the case. The columns at the south end of the building, which were not exposed to the fiery blast from the Lombard block, though in immediate contact with the wood-partitions forming the office of the postmaster, assistant postmaster and cashier, remain intact, while those at other points not directly in contact with any wood-work were entirely destroyed. The destruction of the building was, in my opinion, attributable entirely to the intense heat which was forced through the open windows like hot blasts

from a smelting-furnace, and which thoroughly fused metal and glass. I feel confident that, had the iron columns been rendered fire-proof, which could readily have been done, the interior construction of the building, as well as the contents of the rooms on the east front, including the vaults of the depository, would have been saved; and had the exterior of the building been protected by fire-proof shutters its contents would have been preserved. Indeed, the contents of one room, at the south end of the building, which was the only one in the second story supported by brick walls instead of iron columns, were uninjured. Had the custom-house been isolated on all sides by streets of equal width with those first mentioned, I do not believe that it would have been seriously damaged. The property on which the building was erected was purchased in 1855 and 1857 for \$60,200, and the building erected within 15 feet of the line of the Government property. In 1865 an arrangement was made with Mr. Lombard, at a cost of \$8,400, by which this space was increased, as above stated, to 27 feet. At the time the building was erected there was no difficulty in obtaining all the land that was desired at a low price; and I believe that for an additional sum, not to exceed \$30,000, an ample lot could have been secured and the destruction of the building in all probability averted. If this was an exceptional case some excuse might be offered for the selection of so small a lot; but it has been the rule instead of the exception. One entire side of many of the most important buildings erected prior to 1860 is practically worthless, from the absence of light, due to the smallness of the lot and the proximity of lofty buildings which entirely overshadow them and cut off the light; and under the same circumstances as at Chicago they will share a similar fate.

In this connection I would call the attention of the Department to the necessity for such legislation as will enable the Government to condemn any land that is absolutely needed for the preservation of the buildings now owned by the Government, or for the acquisition of suitable lots for those hereafter to be erected. The experience at Boston has shown that the Department is at present at the mercy of any property-owner, should he desire to use the necessities of the Government for speculative purposes, and that condemnation is the only remedy. In my last report I called attention to the fact, that although the entire space within the custom-house building at Chicago, including the cellar, had been occupied, it was still entirely inadequate for the transaction of the public business, the postal business alone in that city having increased over 50 per cent. during the past three years. The fire has been productive of a still further increase, and it would now be impossible to accommodate that department in the building, even were it desirable to attempt its reconstruction. The increase of the customs business, by reason of direct importations of dutiable merchandise from foreign countries under the provisions of the act of July 14, 1870, has been even greater, with every prospect that it will continue to augment for years to come. Under all the circumstances I believe that the necessities of the Government require the purchase of the remainder of the block on which the custom-house building is located, and the erection thereon without delay of a building of sufficient capacity to accommodate all the branches of the Government service in that city.

The completion of the granite dock on the Battery in New York City renders a decision in regard to a new large office imperative, as it will be of little or no practical value to the revenue department, for whose use it was principally intended, until a suitable building is erected thereon. In this connection I again call attention to the importance of

securing the whole or a portion of the Battery as a site for the erection of a new custom-house, and other buildings for the use of the revenue department in that city. The present buildings are overcrowded and unsuitable, and with the increasing of business of that port cannot much longer be used. The Battery is the natural and only suitable location for such structures, and should be secured before it is too late. I respectfully suggest that authority be obtained from Congress for a full and thorough investigation of this subject.

I also desire to call attention to the importance of erecting appraisers' stores in that city. The building now occupied is not only unsuitable for the examination and appraisal of goods, or for their safety while in the custody of the Government, but for the accommodation of its officers and the public. The enormous increase in that branch of the public business can be well illustrated by a comparison of the receipts of the months of August and September, of the present year, with the corresponding period in 1869 and 1870. The number of packages received is as follows, viz:

Receipts in August, 1869, were .....	15,502
Receipts in September, 1869, were .....	14,875
	<hr/>
	30,467
	<hr/>
Receipts in August, 1870, were .....	16,873
Receipts in September, 1870, were .....	19,293
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	36,166
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Receipts in August, 1871, were .....	23,790
Receipts in September, 1871, were .....	23,427
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	47,217
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The total receipts for 1869 .....	161,886
The total receipts for 1870 .....	200,461
The total receipts for nine months of 1871 .....	173,916

which shows an increase, during the present year, of 30½ per cent. Unless some definite action is taken soon, the rent, which amounts at present to \$66,003 25 per annum, must be increased, and additional accommodations procured elsewhere. If the present system of renting is continued for the next ten years, the Government will pay more than the value of a suitable building and site, without even then obtaining facilities for the transaction of its business or any adequate security for the goods in its custody. I believe few expenditures are more urgently demanded by the necessities of the Government than this. I also desire to call special attention to the great importance of providing similar stores at the ports of Boston, Chicago, Cincinnati, and St. Louis, all of which should be fire-proof—not only in name, but in fact—which can readily be accomplished in buildings of that character, and at a moderate cost. The appraisers' stores at Philadelphia and Baltimore are located in well-constructed buildings of brick and iron, the former being, in my opinion, absolutely fire-proof, and the latter requiring nothing but the addition of fire-proof doors and shutters to make them equally so. This branch of the public service is well provided for in the custom-houses at New Orleans, Charleston, Savannah, Portland, and many minor ports.

I would again recommend the sale of the United States Mint buildings at New Orleans, Louisiana, and Charlotte, South Carolina, neither of which are required for the use of the Government. And I would again urge the passage of an act authorizing the Department in its discretion to dispose of such public property under its charge as may no longer be



required for government purposes. Such a law would greatly facilitate the business of the Department, and obviate the necessity of obtaining special legislation in each case.

I also desire to call special attention to the necessity for a decision in regard to the quarantine buildings and property now owned by the Government. It appears to me that an effective quarantine by State authorities is, in the present condition of inter-communication, impossible, and that if a quarantine is to be maintained, it should be under the direction of the General Government. It needs no argument to prove that a quarantine at the port of New York, however strict, without a quarantine at the adjoining ports, would be of no avail, as infected passengers and merchandise could be landed in the adjoining States, and transported overland to that city almost as quickly as they could pass the ordinary examination and be landed at the wharf in that city. Should it be deemed expedient to place the matter under charge of the General Government, the quarantine property should be placed in good condition, to do which will require the expenditure of a considerable sum of money. If, on the other hand, it should be deemed desirable to leave the enforcement of quarantine in the hands of the State authorities, it appears to me that they should provide proper facilities for carrying into effect their own laws, and that the Government should not be expected to bear the expense of a quarantine over which it has no control.

The change in the grade on the east front of the Treasury building necessitated the reconstruction of the sidewalks and approaches on that front, as well as the underpinning of a large portion of the building. This work is now nearly finished, and will be completed at a cost considerably within the amount of the estimate and the appropriation. I cannot refrain from expressing my regret that so much money was expended on the only portion of the building that cannot be considered permanent, convenient, or suitable. I would respectfully renew my recommendation for the condemnation of the property on the opposite side of the street, as explained in my report for the year 1868, and feel sure that the plan must ultimately be adopted, and that each year's delay but increases the value of the property that must eventually be purchased. In addition to the architectural reasons that necessitate this change, the enormous value to the Government of the Treasury building and its contents, and the irreparable loss to the country that its destruction would involve, no possible precaution for its preservation should be omitted; and, though I do not believe it probable that it will ever be subjected to the ordeal, I am by no means certain that it would escape unscathed from the effects of a conflagration on the east side of Fifteenth Street, under similar conditions as existed at Chicago, the windows and sash of the old portion of the building being of ordinary wooden construction, and the entire building without shutters.

I also desire to renew my recommendation that an appropriation be obtained for additional coal-vaults, and a sub-way for the receipt of fuel and the removal of ashes on the west front; also, the abandoning of the inclined cartway and the narrowing of the area on that front, which designates its magnificent facade and suggests the combination of a palace and a manufactory. These improvements would complete the north, south, and west wings in a permanent and creditable manner, and involve the expenditure of but \$30,000.

I desire to call attention to the fact that it is impossible to comply with the requirements of the fifth, sixth, and seventh sections of the act of July 12, 1870, in regard to unexpended balances, as interpreted by the First Comptroller of the Treasury, who is vested by law with

authority to determine the effect of its provisions. It needs no argument to prove that each suspension of work during the progress of a building costs the Government a sum of money, greater or less, in proportion to the magnitude of the undertaking. No saving can result from the application of this law to public works of any kind or description; on the contrary, it is a constant and fruitful source of embarrassment and annoyance; it multiplies the labors and responsibilities of every officer in charge of the construction or repair of public works; increases the clerical labors; complicates the accounts; and results only in an increase of cost to the Government, and a delay in the performance of the duties assigned to such officer. I fail to see any possible benefit to be derived from the application of this law to the class of expenditures to which I have alluded.

The progress and cost of the works under the supervision of this office have during the past year been satisfactory, save in a few instances. Contracts for the supplies of material have been generally made below current market rates, and the cost of the work, as a rule, kept within the estimates. The liberal appropriation made at the last session of Congress for repairs and furniture has enabled the Department to make many necessary repairs, and improve the condition of the public buildings. Expenditures have been judiciously made, and with a view to permanency as well as immediate convenience. The large number of buildings and the pressing necessity that existed for this appropriation has, however, rendered it necessary to make nothing more than temporary repairs on a considerable number, and I earnestly hope that the additional appropriation asked for will be granted. It is undoubtedly far cheaper to keep the buildings in good repair than to restore them from the condition of dilapidation, which has been too generally the case. The appropriation for the pay of janitors and custodians of public buildings has enabled the Department to protect much valuable property from injury; and by keeping its buildings in a creditable condition has greatly added to the convenience and comfort of the public as well as the officers of the Government. It is believed that the direct saving to the Government is more than the amount of the appropriation for this purpose.

I desire once more to enter my protest against the inadequate compensation of the officers, clerks, and employes of this office. The salaries are either too large or too small. If the mere object is to secure the services of persons who desire positions under the Government, they are certainly too high, as occupants for every place can be obtained at much lower rates, who will willingly draw their salary with zeal and regularity. But if the object is to obtain and retain persons who are competent to perform their duties, and whose services are valuable to the Government, they are far too low. The talents and integrity required for the proper transaction of the public business will and do command much higher rates from private individuals and corporations. Many Government employes holding responsible positions involving large expenditures receive less pay than journeymen mechanics whose responsibilities end with each day's work. This office has, perhaps, been more embarrassed from this cause than any other, many of its employes being men of technical education, whose places cannot readily be filled. I feel it but justice to call special attention to the services rendered by the assistant supervising architect, James O. Rankin, esq., whose capacity, fidelity, and integrity cannot be too highly praised. Mr. Rankin has retained his position thus far at my personal solicitation, with the hope that justice would be done him. I cannot longer

hope to retain him, unless his compensation is increased to a degree that approximates the value of the services rendered and the responsibilities of his position.

I also take great pleasure in testifying to the fidelity and industry of the clerks and draughtsmen employed in this office, and my indebtedness to them for the success that has attended my labors during the past year.

In conclusion, I desire to tender you my thanks for the cordial support and assistance, and the uniform courtesy which I have experienced at your hands, and remain,

Yours, very respectfully,

A. B. MULLETT,  
*Supervising Architect.*

Hon. GEORGE S. BOUTWELL,  
*Secretary of the Treasury.*

## REPORT OF THE SOLICITOR OF THE TREASURY.

DEPARTMENT OF JUSTICE,  
OFFICE OF THE SOLICITOR OF THE TREASURY,  
Washington, D. C., November 23, 1871.

SIR: I have the honor to transmit herewith seven tabular statements, exhibiting the amount, character, and results of the litigation under the direction of this office for the fiscal year ending June 30, 1871, so far as the same are shown by the reports received from the United States attorneys for the several districts. These tables embrace, respectively:

1. Suits on custom-house bonds.
2. Suits on transcripts of accounts of defaulting public officers, excepting those of the Post-Office Department, adjusted by the accounting officers of the Treasury Department.
3. Post-Office suits, embracing those against officers of the Post-Office Department, and cases of fines, penalties, and forfeitures for violation of the postal laws.
4. Suits for the recovery of fines, penalties, and forfeitures under the customs revenue and navigation laws.
5. Suits in which the United States is interested, not embraced in the other classes.
6. Suits against collectors of customs and other agents of the Government, for refund of duties and acts done in the line of their official duty.
7. A general summary or abstract of all the other tables.

An examination of this summary will show that the whole number of suits commenced within the year was 2,116, of which

24 were of class 1, for the recovery of .....	\$1,014, 24 09
94 were of class 2, for the recovery of .....	3,606, 661 06
123 were of class 3, for the recovery of .....	69, 360 09
514 were of class 4, for the recovery of .....	7, 452, 269 98
610 were of class 5, for the recovery of .....	460, 965 79
622 were of class 6.	

Making a total sued for, as reported, of..... 12, 604, 601 01

Of the whole number of suits brought, 493 were decided in favor of the United States; 24 were adversely decided; 387 were settled and

dismissed; in 9, penalties were remitted by the Secretary of the Treasury; leaving 1,203 still pending. Of those pending at the commencement of the year, 566 were decided for the United States, 183 were decided adversely, and 1,142 were settled and dismissed. The entire number of suits decided or otherwise disposed of during the year was 2,804; the whole amount for which judgments were obtained, exclusive of decrees *in rem*, was \$1,188,469 17, and the entire amount collected from all sources was \$1,289,929 06.

The following tables exhibit a comparative view of the litigation of the last year and the next preceding one:

Date.	In suits commenced during the fiscal years ending June 30, 1870, and June 30, 1871.							
	Aggregate sued for.	Aggregate in judgment for the United States.	Collected.	Decided for the United States.	Decided against the United States.	Settled and dismissed.	Remitted.	Total number of suits brought.
June 30, 1870 .....	\$5,367,007 44	\$73,388 24	\$231,884 71	388	11	261	32	1268
June 30, 1871 .....	12,604,601 01	280,410 97	586,271 76	493	24	387	9	1203
								2116

Date.	In suits commenced prior to the fiscal years ending June 30, 1870, and June 30, 1871.					Proceedings in all suits.			
	Aggregate of judgments in old suits.	Decided for the United States.	Decided against the United States.	Settled and dismissed.	Collections in old suits.	Total number of suits disposed of.	Whole number of judgments in favor of the United States.	Whole amount of judgments.	Whole amount collected.
June 30, 1870 .....	\$109,004 02	123	83	422	\$245,140 66	1320	511	\$272,393 16	\$477,025 37
June 30, 1871 .....	908,058 20	566	183	1142	703,657 30	2804	1059	1,188,469 17	1,289,929 06

I have to remark that the suit of the United States against the Nashville and Chattanooga Railroad Company, brought in the middle district of Tennessee prior to the fiscal year, was during the year compromised by the Secretary of War, under the act of Congress approved March 3, 1871, the United States receiving bonds of the said company to the amount of \$1,000,000, secured by mortgage on the road, &c., in settlement of the suit. This amount is, however, not included in this report as a collection.

I am, very respectfully,

E. C. BANFIELD,  
*Solicitor of the Treasury.*

Hon. GEORGE S. BOUTWELL,  
*Secretary of the Treasury.*

## REPORT OF THE CHIEF OF THE BUREAU OF STATISTICS.

TREASURY DEPARTMENT,  
*Bureau of Statistics, October 31, 1871.*

SIR: I have the honor to submit the following report of the operations of this Bureau during the fiscal year ended June 30, 1871:

## CLERICAL FORCE.

At the close of the year the clerical force of the Bureau consisted of thirty males and eight females, who were employed as follows:

Division.	Name of chief.	Number of clerks.		
		Males.	Females.	Total.
Examination .....	J. N. Whitney .....	4	1	5
Compilation .....	Thomas Clear .....	14	3	17
Tonnage and immigration .....	L. F. Ward .....	3	1	4
Registry of merchant marine .....	J. R. Parker .....	3	1	4
Revision, translation, and miscellaneous .....	A. W. Angerer .....	2	1	3
PUBLICATION and miscellaneous .....	James Ryan .....	1	1	2
Library and files .....	E. T. Peters .....	1		1
Stationery pay, and property .....	J. D. O'Connell .....	1		1

In addition to the female clerks above designated, one has charge of the correspondence.

At the present time the clerical force consists of one chief clerk, Mr. E. B. Elliott, (who is, moreover, a member of the permanent board of civil service examiners for the Treasury Department, and also a member of the commission for improving the efficiency of the civil service of the United States,) thirty-one male and nine female clerks, one of the latter being assigned from another Bureau.

## WORK OF THE BUREAU

Owing to the peculiar and varied character of the work performed in the Bureau, it is impossible to furnish a tabular exhibit which shall indicate its nature and extent.

*Examination.*—In the division of examination, for example, the following work was performed:

Number of pages of letters written .....	5,259
Letters acknowledged .....	2,031
Acknowledgments of statements written .....	5,387
Statements examined .....	18,940
Statements called for .....	741
Statements corrected by correspondence .....	1,360

The above figures give, however, a very inadequate conception of the critical and elaborate examination of the various monthly and quarterly returns from the various custom-houses, or of the variety of work of a miscellaneous character performed in that division.

*Compilation.*—The same remark is applicable to the division in which the clerks are employed in the compilation of statistics of commerce. This division is subdivided into sections, embracing statistics of home consumption, indirect and intransit trade, and warehouse statistics, of which sections Charles H. Evans, J. D. O'Connell, and Miss M. A. Spencer are the respective chiefs.

*Immigration and navigation.*—The statistics of navigation are now published monthly, instead of quarterly, as heretofore, involving additional labor in this division, to which is also assigned the collection and digest of the statistics of immigration. Extraordinary, and to some extent successful, efforts have been made during the past year to obtain and publish accurate statements of the nationality and occupation, as well as the sex, age, &c., of each immigrant. Special efforts have also been made to secure accurate statistics of the departure of emigrants from this country, a task rendered the more difficult, owing to the absence of compulsory legislation on this subject.

*Numbering of vessels, tonnage, &c.*—The compiling, copying, proof-reading, and distribution of the last annual list of merchant vessels occupied a large portion of the force in this division during the year. Official numbers were assigned to about 3,000 vessels, involving a considerable amount of careful labor in searching the previous records to avoid duplication of numbers, in filling up and forwarding notices to the applicants, entering the awards upon a manuscript list, and the permanent register of the office. Compilations for the monthly and annual reports of the Bureau, the preparation of various statements for Members of Congress and others, with a variety of miscellaneous work, formed part of the operations of this division.

A table exhibiting the number of vessels and amount of tonnage belonging to the several customs districts of the United States on the 30th of June, 1871, geographically classified, is appended to this report. From this it will be seen that the tonnage of the country was, in the aggregate, 4,111,412, a net increase over that at the close of the preceding fiscal year of 165,262 tons.

*Revision and translation.*—The vast amount of statistics compiled in the Bureau for publication, and in response to requests for information, involves a corresponding amount of labor in revision. As the statistical publications of various countries in continental Europe possess information of great value, the labor of translation previous to publication is not inconsiderable.

*Publication, library, and miscellaneous.*—The work performed by the chiefs of these divisions and their assistants is of too varied a character for detailed notice. It is sufficient to say that the duties of these officers are responsible and onerous.

#### PUBLICATIONS OF THE BUREAU. ●

*Monthly reports of commerce and navigation.*—The monthly reports of this Bureau have, during the year, been regularly published. Compiled at the earliest date possible after the receipt of the returns, they have been printed as soon thereafter as the arrangements of the Congressional Printing Office would permit. Although it is impossible to obtain and publish the returns as early as is done in England, yet it is satisfactory to know that the necessary delay in publication is compensated by the increased accuracy of these monthly reports. Widely distributed, as they are, throughout the country, and, to some extent, in Europe, it is unnecessary to append to this report the statements they contain. To render these reports increasingly valuable new features are from time to time introduced, which have hitherto met with general approval.

*Annual report of commerce, immigration, and navigation.*—Notwithstanding the necessary delay in obtaining, correcting, and compiling the various statements for the annual report—the delay increased by the great amount of labor required at the printing office in the composition and

printing of 800 octavo pages of rule and figure work—the volume for the fiscal year 1870 was bound and distributed three months earlier than in previous years; and had it not been for the hindrance which occurred in binding, owing to the pressure of other work, this indispensable collection of commerce and navigation statistics would have been submitted to Congress in December. In consequence of extra exertions, which have again been made, the data for 1871 have been compiled and sent to the Congressional Printing Office at a period sufficiently early to justify the belief that “said report, embracing the returns of the commerce and navigation, the exports and imports of the United States, to the close of the fiscal year, shall be submitted to Congress in a printed form on or before the first day of December,” in accordance with the provisions of the act under which the Bureau was established.

*List of merchant-vessels of the United States.*—Agreeably to the requirements of the act of July 28, 1866, the third annual statement of “vessels registered, enrolled, and licensed under the laws of the United States, designating the class, name, tonnage, and place of registry,” as well as the official number and signal letters awarded to each vessel, was prepared, and 3,000 copies published. The officers of customs, the commanders of United States war-vessels, and the largest merchant-vessels engaged in the foreign trade, as well as the principal ship-owners, have been supplied with it.

#### *Special Report on Immigration.*

This report, including information for immigrants and tables showing the cost of labor and subsistence in the United States, having been compiled during the year, was submitted to the House of Representatives at the session in March last. Congress having adjourned without taking action upon the subject the report was stereotyped, and 3,000 copies printed for distribution in Europe and in this country, at the expense of the Treasury Department.

*Comparative tariff tables.*—To supply a want long felt, “a comparative statement of the rates of duties and imposts under the several tariff acts from 1789 to 1870,” was prepared and 1,000 extra copies printed for distribution. After the great labor involved in its preparation, it is gratifying to know that its accuracy is almost if not quite absolute, and that it is highly appreciated by those who are best qualified to judge of its value. It forms Appendix A of a “Special Report on the Customs-tariff Legislation of the United States,” which will soon be submitted to you.

#### USEFULNESS OF THE BUREAU FOR LEGISLATIVE AND OTHER PURPOSES.

During the last two years the services of the Bureau were called into requisition to an unusual extent, and its usefulness recognized by members of both Houses of the national legislature.

While the periodical statements of the trade of the country given in the published monthly reports of the Bureau afforded reliable data for legislative purposes, those of a miscellaneous character have also furnished a variety of important foreign statistics. The constant calls for statistical information by members of Congress and for commercial and other purposes have been responded to so far as the ability of the Bureau permitted; moreover, it has been the aim of the undersigned to anticipate and provide for the demands for such data.

cers of this Bureau, it is pertinent to inquire whether, by an extension of its powers, it might not be made more useful in this direction; and also, whether the functions for the discharge of which the creation of a bureau of immigration has been proposed, cannot be far more economically performed by utilizing the facilities which this bureau already possesses.

#### SALARIES OF OFFICERS.

In bearing testimony to the industry and efficiency of the clerks, both male and female, as well as of other employés of this Bureau, I cannot close this report without directing your attention to the low salaries paid to the officers. The chiefs of division and other officers are men of ability and great industry. The duties of some of them require talents of a high order, and involve exhaustive labor. Giving, as they do, the best years of their lives to the public service, and contributing to establish the reputation of the Bureau, in furnishing to the public accurate and trustworthy information, they receive very inadequate remuneration. Some of the clerks of the fourth class, while performing their duties satisfactorily, are exempt from the cares and responsibilities which attach to chiefs of division, and yet the latter receive no greater salary than the former.

It is respectfully urged, therefore, that several of these officers receive the salary of head of division, as provided by law for the office of internal revenue.

It is not, perhaps, improper to remark that the work of the Bureau, although neither smaller in amount nor less reliable in character than in former years, is now performed by fewer clerks and at considerably less aggregate expense, as the following figures will show:

Period.	Average number of officers, clerks, and other employes.	Average monthly salaries.
Year ended March 31, 1869 .....	60	\$5,531 62
Year ended March 31, 1870 .....	52	4,824 08
Nineteen months ended October 31, 1870 .....	45	4,171 38

From the above statement it appears, that for the past nineteen months, as compared with the year ended March 31, 1869, there has been a reduction of the expenditure of the Bureau for salaries at the rate of \$16,323 per annum; less than one-third of which sum, if applied to the increase of the existing salaries, would afford adequate remuneration, not only to the officers indicated, but also to those upon whom the chief responsibilities of the Bureau rests.

I have the honor to be, very respectfully, your obedient servant,

EDWARD YOUNG,

*Chief of Bureau.*

Hon. GEORGE S. BOUTWELL,

*Secretary of the Treasury.*



Table exhibiting the number of merchant-vessels and amount of tonnage belonging within the several customs districts and ports of the United States on the 30th of June, 1871, geographically classified.

Customs districts.	Sailing-vessels.		Steam-vessels.		Unrigged vessels.		Total.	
	No.	Tons.	No.	Tons.	No.	Tons.	Vessels.	Tons.
<b>ATLANTIC AND GULF COAST.</b>								
Boston, Me.	237	37,141.87	5	668.72			232	37,809.59
Bath, Me.	244	129,043.33	10	3,437.56			258	131,480.89
Bristol, Me.	353	72,965.20					353	72,965.20
Canton, Me.	352	24,302.80					352	24,302.80
Frenchman's Bay, Me.	286	17,420.19	3	314.19			289	17,810.38
Kennebunk, Me.	40	3,479.92					40	3,479.92
Marblehead, Me.	215	24,933.53	2	133.91			217	25,064.44
Penikese, Me.	185	21,718.02	9	3,669.35			194	25,387.37
Portland and Falmouth, Me.	354	61,122.05	21	8,754.77			375	69,876.82
Rockport, Me.	23	3,870.07	3	340.02			26	4,210.09
Waldborough, Me.	546	93,783.24					546	93,783.24
Wiscasset, Me.	166	9,519.17					166	9,519.17
Yarmouth, Me.	15	709.12	1	15.47			16	723.59
	3,010	519,084.51	54	17,331.99			3,064	536,416.50
<b>Portsmouth, N. H.</b>	68	19,457.86	5	459.22			71	19,917.09
Barnstable, Mass.	205	49,667.34	1	266.64			206	49,933.98
Boston and Charlestown, Mass.	796	264,277.49	61	22,666.50			857	286,943.99
Edgartown, Mass.	21	2,733.85					21	2,733.85
Fall River, Mass.	115	10,861.65	10	2,069.62			125	12,931.27
Glastonbury, Mass.	350	29,260.10	4	191.62			354	29,451.72
Marblehead, Mass.	67	2,703.86					67	2,703.86
Nantuxet, Mass.	13	1,201.22	1	464.00			14	1,665.22
New Bedford, Mass.	296	54,780.01	5	1,429.03			301	56,209.04
Newburyport, Mass.	76	11,077.17	1	15.91			77	11,093.08
Provincetown, Mass.	114	4,670.52					114	4,670.52
Salmon and Beverly, Mass.	94	9,110.45					94	9,110.45
	2,723	442,945.69	80	27,381.32			2,806	470,327.01
<b>Bristol and Warren, R. I.</b>	19	1,212.44	1	34.28			19	1,246.72
Providence, R. I.	74	4,711.94	11	16,463.01			85	21,574.95
Providence, R. I.	71	10,567.46	21	10,502.55			92	21,070.01
	173	16,511.88	33	27,400.84			206	43,912.72
<b>Fairfield, Conn.</b>	150	8,533.81	7	1,932.75	6	746.82	163	11,213.38
Hartford, Conn.	125	11,739.32	22	7,259.19	1	324.49	148	19,322.00
New Haven, Conn.	132	13,780.21	9	3,513.44	6	1,269.81	147	18,563.46
New London, Conn.	159	10,496.05	16	10,760.42			174	21,256.47
Stonington, Conn.	100	3,593.27	7	6,318.33			107	9,911.60
	665	46,141.66	61	29,784.53	13	2,341.12	739	80,307.31
<b>New York, N. Y.</b>	2,416	467,063.40	674	307,390.40	1,862	223,952.55	4,954	999,306.75
Reg. Harbor, N. Y.	225	9,025.40	1	31.50			226	9,056.90
	2,643	476,088.80	675	307,421.90	1,862	223,952.55	5,180	1,009,365.65
<b>Bridgetown, N. J.</b>	279	11,779.51	5	1,179.47	1	179.51	285	13,138.49
Burlington, N. J.	47	7,036.34	14	2,792.80	73	6,830.70	134	12,659.94
Great Egg Harbor, N. J.	119	12,444.67					119	12,444.67
Little Egg Harbor, N. J.	54	5,764.90					54	5,764.90
Keyport, N. J.	65	1,777.14	26	2,754.86	33	3,771.91	124	9,603.91
Park Avenue, N. J.	219	10,053.55	37	14,229.61	44	7,369.42	293	31,652.58
	776	46,692.31	82	20,947.94	151	14,691.54	1,009	88,331.09
<b>Philadelphia, Pa.</b>	766	97,431.14	234	50,052.71	1,543	149,318.67	2,546	297,002.52
Delaware, Del.	140	9,056.64	15	3,561.64	9	775.93	164	13,394.21
Annapolis, Md.	29	2,025.10	2	1.17			31	2,026.27
Baltimore, Md.	723	45,331.07	99	34,464.10	514	30,300.79	1,336	114,097.96
Eastern District, Md.	556	15,949.85					556	15,949.85
	1,391	63,997.66	101	38,547.97	514	30,300.79	2,006	128,145.68

Table exhibiting the number of merchant-vessels, &amp;c., geographically classified—Cont'd.

Customs districts.	Sailing-vessels.		Steam-vessels.		Unrigged vessels.		Total.	
	No.	Tons.	No.	Tons.	No.	Tons.	Vessels.	Tons.
<b>ATLANTIC AND GULF STATES.</b>								
Georgetown, D. C.	73	2,009.62	24	5,182.92	274	16,612.32	371	23,804.86
Alexandria, Va.	82	1,854.18	12	513.28	68	4,422.31	162	6,789.77
Cherrystone, Va.	327	6,896.11	9	41.34	.....	.....	329	6,867.45
Norfolk and Portsmouth, Va.	296	4,702.58	31	2,673.63	8	567.98	335	7,944.19
Petersburgh, Va.	3	60.21	1	11.11	.....	.....	4	77.32
Richmond, Va.	3	76.05	15	1,855.69	59	3,388.66	77	5,320.40
Tappanauock, Va.	28	630.44	.....	.....	.....	.....	28	630.44
Yorktown, Va.	93	2,188.29	.....	.....	.....	.....	93	2,188.29
	832	16,343.86	61	5,094.05	135	8,378.95	1,028	29,816.86
Albemarle, N. C.	46	660.24	4	445.70	5	191.69	55	1,497.63
Beaufort, N. C.	72	1,032.94	.....	.....	.....	.....	72	1,032.94
Pamlico, N. C.	83	1,560.45	1	120.02	.....	.....	84	1,680.47
Wilmington, N. C.	20	493.45	15	1,000.23	.....	.....	35	2,063.68
	221	3,937.08	20	2,165.95	5	191.69	246	6,294.72
Beaufort, S. C.	6	82.50	.....	.....	.....	.....	6	82.50
Charleston, S. C.	134	2,960.75	17	2,988.03	.....	.....	151	5,948.78
Georgetown, S. C.	6	528.32	5	242.64	.....	.....	11	770.96
	146	3,571.57	22	3,230.67	.....	.....	168	6,802.24
Saint Mary's, Ga.	18	4,810.55	.....	.....	.....	.....	18	4,810.55
Savannah, Ga.	25	532.34	21	3,685.14	.....	.....	46	4,217.48
	43	5,362.89	21	3,685.14	.....	.....	64	9,048.03
Apalachicola, Fla.	9	115.44	6	1,853.07	.....	.....	15	1,968.51
Fernandina, Fla.	3	49.22	1	183.16	.....	.....	4	232.38
Key West, Fla.	92	1,086.09	.....	.....	.....	.....	92	1,086.09
Pensacola, Fla.	57	1,664.96	10	6,265.19	.....	.....	67	2,930.17
Saint Augustine, Fla.	2	39.42	.....	.....	.....	.....	2	39.42
Saint John's, Fla.	2	38.95	17	1,670.49	.....	.....	19	1,709.44
Saint Mark's, Fla.	14	107.07	.....	.....	.....	.....	14	107.07
	179	3,701.17	34	4,072.81	.....	.....	213	8,673.98
Mobile, Ala.	74	1,569.57	52	12,113.17	96	4,364.20	222	18,047.00
Pearl River, Miss.	79	1,582.20	2	27.93	.....	.....	81	1,610.13
New Orleans, La.	378	12,795.32	172	45,248.59	15	1,009.81	565	59,053.72
Teche, La.	15	248.01	13	1,065.62	1	114.38	29	1,428.21
	393	13,043.33	185	46,314.41	16	1,724.19	594	61,081.93
Brazos de Santiago, Tex.	6	101.71	3	551.91	.....	.....	9	1,053.62
Corpus Christi, Tex.	19	357.49	.....	.....	.....	.....	19	357.49
Saluria, Tex.	39	683.68	.....	.....	.....	.....	39	683.68
Texas, Tex.	159	3,413.38	29	4,689.27	19	2,034.06	207	10,136.71
	223	4,556.46	32	5,641.18	19	2,034.06	274	12,231.70
<b>WESTERN RIVERS.</b>								
Alton, Ill.	.....	.....	4	796.92	.....	.....	4	796.92
Burlington, Iowa.	.....	.....	10	736.64	.....	.....	10	736.64
Cairo, Ill.	.....	.....	13	1,768.61	.....	.....	13	1,768.61
Cincinnati, Ohio.	.....	.....	122	40,614.95	310	38,505.17	432	79,210.12
Dubuque, Iowa.	.....	.....	20	2,078.00	48	2,734.02	68	4,812.02
Evansville, Ind.	.....	.....	49	8,222.66	14	1,001.39	63	9,224.05
Galena, Ill.	.....	.....	30	7,222.54	82	9,314.76	112	16,537.30
Keokuk, Iowa.	.....	.....	8	802.17	.....	.....	8	802.17
Louisville, Ky.	.....	.....	39	10,353.00	5	2,563.53	44	12,916.53
Memphis, Tenn.	.....	.....	42	9,297.61	.....	.....	42	9,297.61
Minnesota, Minn.	.....	.....	63	11,146.17	77	9,193.01	140	20,341.18
Nashville, Tenn.	.....	.....	20	3,465.53	.....	.....	20	3,465.53
Natchez, Miss.	.....	.....	3	135.57	.....	.....	3	135.57
Paducah, Ky.	.....	.....	11	2,010.23	.....	.....	11	2,010.23
Pittsburgh, Pa.	.....	.....	155	44,221.84	158	32,458.19	313	76,680.03
Quincy, Ill.	.....	.....	9	1,441.88	12	678.68	21	2,120.76
Saint Louis, Mo.	.....	.....	146	67,636.04	68	23,608.45	214	91,244.49
Vicksburg, Miss.	.....	.....	14	1,918.93	.....	.....	14	1,918.93
Wheeling, W. Va.	.....	.....	51	7,452.81	42	3,554.96	93	11,011.77
Saint Joseph, Mo.	.....	.....	5	1,149.49	.....	.....	5	1,149.49
	.....	.....	814	223,596.19	816	192,804.36	1,630	416,400.55

Table exhibiting the number of merchant-vessels, &amp;c., geographically classified—Continued.

Customs districts.	Sailing-vessels.		Steam-vessels.		Unrigged vessels.		Total.	
	No.	Tons.	No.	Tons.	No.	Tons.	Vessels.	Tons.
<b>S. ATLANTIC COAST.</b>								
Buffalo Creek, N. Y. ....	112	39,000.67	113	51,500.00	405	57,021.02	730	146,530.69
Cape Vincent, N. Y. ....	29	4,067.91	1	17.63			30	4,105.54
Champlain, N. Y. ....	119	7,662.86	8	818.89	668	42,580.18	795	51,061.88
Chautauque, Ill. ....	353	64,702.36	84	6,846.30	933	23,735.39	1,370	95,283.95
Cuyahoga, Ohio ....	152	24,692.03	52	12,855.03	203	10,330.03	407	57,877.09
Delaware, Mich. ....	199	31,084.50	150	36,829.06	46	11,183.56	395	79,101.12
Franklin, N. Y. ....	3	571.23	1	545.3			7	1,116.53
Free, Pa. ....	25	4,834.31	16	2,460.44	238	8,404.23	279	15,758.98
Genesee, N. Y. ....	11	1,350.34	4	379.15	212	26,456.65	227	28,186.14
Harbor, Mich. ....	127	11,450.29	73	9,654.38	48	10,386.34	248	31,500.01
Monroe, Ohio ....	26	5,066.48	17	1,108.51	178	10,446.51	221	16,641.50
Marquette, Mich. ....	96	6,069.54	65	3,891.67	14	2,850.64	175	12,791.85
Michigan, Wis. ....	207	26,754.72	44	14,787.97			251	41,542.69
Naples, N. Y. ....	5	816.34	1	267.33	33	3,637.35	39	4,721.22
Onondaga, N. Y. ....	15	1,501.79	8	267.79	3	384.23	26	2,153.74
Orange, N. Y. ....	75	16,110.17	15	677.96	847	90,909.44	937	106,997.57
Sanitary, Ohio ....	65	9,546.99	80	2,878.78			85	11,665.77
Superior, Mich. ....	13	1,531.51	29	1,618.78			42	3,143.29
Vermont, Vt. ....	9	572.22	6	4,760.64	8	556.65	23	5,860.51
	1021	266,468.09	677	151,029.69	3226	228,563.61	5,924	716,061.39
<b>PACIFIC COAST.</b>								
Alaska, Alaska ....	6	372.75					6	372.75
Oregon, Oreg. ....	30	1,764.15	11	981.07	3	190.57	44	2,935.79
Port Sound, Wash. ....	70	21,617.68	23	2,843.73	6	91.31	99	24,552.72
San Francisco, Cal. ....	723	78,860.40	145	51,964.13	64	8,061.48	932	138,886.01
Wilmington, Oreg. ....	5	749.77	30	7,041.24	6	334.58	41	8,125.59
	834	103,404.75	208	62,832.17	79	8,677.94	1,121	174,914.86

## RECAPITULATION.

	Vessels.	Tons.
Sailing-vessels .....	17,071	2,167,339.54
Steam-vessels .....	3,499	1,049,151.94
Unrigged vessels .....	8,757	894,831.92
Total .....	29,327	4,111,412.40

## REPORT OF THE DIRECTOR OF THE MINT.

MINT OF THE UNITED STATES,  
Philadelphia, September 28, 1871.

SIR: I have the honor to submit the following report of the operations of the Mint and branches for the fiscal year ending June 30, 1871:

## DEPOSITS AND COINAGE.

The deposits of bullion at the Mint and branches during the fiscal year were as follows: Gold, \$37,054,202 26; silver, \$5,975,982 54; total deposits, \$43,030,184 80. Deducting from this total the re-deposits, or bars made at one branch of the Mint and re-deposited in another for coinage, the amount will be \$39,137,404 13.

For the same period the coinage was as follows: Gold coin, number of pieces, 1,120,916; value, \$21,302,473; unparted and fine-gold bars, \$13,161,000 43. Silver coin, pieces, 3,664,792; value, \$1,955,905 25; silver bars, \$3,544,180 13; nickel-copper and bronze, pieces, 11,672,750;

value, \$283,760; total number of pieces struck, 16,458,458; total value of coinage, \$40,187,409 80.

The distribution of the bullion received and coined at the Mint and branches was as follows:

*Philadelphia.*—At Philadelphia, gold deposited, \$3,064,733 31; gold coined, \$3,206,760; fine-gold bars, \$129,184 88; silver deposited and purchased, \$1,557,892 50; silver coined, \$1,156,255 25; silver bars, \$143,647 75; nickel-copper and bronze coinage, value, \$283,760; total deposits of gold and silver, \$4,622,625 81; total coinage, \$4,919,607 88; total number of pieces, 13,670,015.

*San Francisco.*—At the branch mint, San Francisco, the gold deposits were \$25,521,650 56; gold coined, \$24,241,006 23; silver deposited and purchased, \$937,577 89; silver coined, \$908,015 27; total deposits and purchases, \$26,459,228 45; total coinage, \$25,149,021 50; total number of pieces, 2,649,900.

*New York.*—The assay office in New York received during the year in gold bullion, \$6,345,338 88; in silver bullion, including purchases, \$2,171,120 36; total value received, \$8,516,459 24; number of fine-gold bars stamped, 9,769; value, \$5,461,801 10; silver bars, 10,763; value, \$1,269,501 75; total value gold and silver bars stamped, \$6,731,302 85.

*Denver.*—At the assay office, late branch mint, Denver, Colorado, the deposits for unparted bars were, gold, \$1,104,147 10; silver, \$18,561 63; total deposits, \$1,122,708 73; an increase of deposits over the last year of \$116,658 47. This is a very gratifying fact, and encourages the belief that, as the mineral resources of the district are developed, the business of this office will be correspondingly increased. It is now engaged, as last year, in melting, assaying, and stamping gold and silver bullion in unparted bars, bearing the Government stamp of weight and fineness. The assay office, in the performance of its appropriate functions, fully meets all the demands of the mining interests of Colorado.

*Charlotte.*—The deposits at the branch mint at Charlotte, North Carolina, have not been large, and, I regret to say, are not increasing. The deposits, as heretofore, are assayed and returned to depositors in the form of unparted bars. The deposits for bars during the year were, gold, \$14,522 81; silver parted from gold, \$145 31; total deposits, \$14,668 12; a decrease from last year of \$1,440 48.

*Dahlonaga and New Orleans.*—The branch mints at these places are still closed. As stated in my last report, no necessity exists for their being opened again as assay offices or branch mints.

*Carson City.*—This branch mint has been in successful operation during the past fiscal year, and the prospects for the future are most encouraging. The deposits during the year were, gold, \$1,003,809 60; gold coined, \$230,715; unparted gold bars, \$731,320 79; silver deposits and purchases, \$1,290,684 85; silver coined, \$52,875; unparted and fine bars, \$1,069,645 05; total deposits and purchases, \$2,294,494 45; total number of pieces, 138,543.

This statement exhibits the gratifying fact that the amount in value of the gold and silver deposits during the year has exceeded that of the past year more than \$2,000,000. The superintendent, in his report, expresses full confidence in the future of that branch. A bullion fund adequate to the exigencies of the business of the Mint has been provided, and full authority has been given to melt, assay, and stamp gold and silver bullion, and return the same to depositors in unparted bars, bearing the Government stamp of weight and fineness. This has largely increased its business and added to its usefulness. The clerical force of

this branch is inadequate, and should be increased. The salaries of all the officers and clerks are too small for that locality, and I earnestly recommend an increase of salary and clerical force. The policy of the Government toward this and similar institutions, in their relation to the development of the mineral wealth of our country, should be liberal and generous.

In addition to the increase of business from the assaying and stamping of unparted gold and silver bars, the superintendent in his report says: "To the increased product of the mines throughout the State may also be attributed the enlarged business of the past year. The late rich discoveries of ore at the lowest levels of the Comstock Lode, and the constantly increasing product of the country to the south and east of this city, have materially aided in adding to our business; while on the other hand a reciprocal benefit, both to produce and to the State, has been derived by the location of this institution near the mining centers, and the accuracy and promptitude of its returns."

The suggestions of the report on other subjects connected with the prosperity of this branch are worthy of consideration, and only a want of power prevents their adoption. The report is highly encouraging, and its facts and statements attest the efficiency of its management.

I again refer to the importance of the early completion of the new branch mint at San Francisco, and it is gratifying to know that the work is being prosecuted with energy.

*Boise City.*—The assay office at Boise City, Idaho, will soon be prepared for active operations. The building is erected, and the apparatus and appliances necessary for such an institution nearly ready. It is hoped that this office, in its appropriate work, will greatly aid and encourage the efforts made to discover and increase the production of the precious metals.

#### REDEMPTION OF COPPER AND NICKEL-BRONZE COINS.

The redemption of the nickel copper cents in exchange for the five-cent nickel coin, was continued, as authorized by law, until the 25th day of March, A. D. 1871, at which time the law for the general redemption of all the base or token coinage went into operation. The amount thus redeemed to the 25th day of March, 1871, was, pounds, 39,527; value, \$38,736 48.

The amount of base coins redeemed under the act of March 3, 1871, to June 30, 1871, was, in tale or nominal value, \$178,133 75. The different kinds redeemed under that law to same date are as follows, viz:

Denomination and kind.	Number of pieces.	Value.
Copper one-cent pieces .....	1,005,215	\$10,052 15
Nickel one-cent pieces .....	3,645,921	36,459 21
Bronze one-cent pieces .....	3,101,810	31,018 10
Bronze two-cent pieces .....	1,572,016	25,440 32
Nickel three-cent pieces .....	219,144	6,574 32
Partial five-cent pieces .....	1,371,793	68,569 65
Total redemption to June 30, 1871 .....	10,815,899	178,133 75

It is worthy of remark that while the sum of \$178,133 75 was redeemed during that period, orders were received during the same time for a large amount of the bronze one and two and the nickel-copper three and five cent pieces.

## PROFITS.

The profits of the nickel-copper and bronze coinage paid into the Treasury of the United States during the fiscal year were \$100,000.

The alloy of the minor coinage has been regularly assayed and reported by the assayer of the Mint; and the legal proportion of the constituent metals been properly maintained.

The continued suspension of specie payments restricts the work of the Mint and the amount of the coinage. The capacity of the Mint and branch mints now in operation is more than sufficient to meet every demand for the conversion of the gold and silver deposits into coin, and consequently there is no legitimate necessity for increasing the number of branch mints. My views on this subject in connection with assay offices remain as expressed in former reports. From the discoveries and developments constantly making of the deposits of the precious metals in our western States and Territories, it is not beyond the practical and real to say that before another decade the annual production of gold and silver in the United States will be more than doubled. The reports are full of encouragement; but at the same time care must be taken by the prudent to distinguish between the true statement and the exaggeration of the mere speculator.

## DEVICES ON COINS.

This subject was referred to in my last annual report. The legends and devices on our national coinage should not be too frequently changed; but change, when it rises to the dignity of an improvement, should be encouraged. It should not be so great as to destroy the identity of the new with the previous coinage of the country, or remove those peculiar national characteristics that have ever been recognized by the people as the stamp and certificate of the Government. Art and science are progressive. Why should not the influence of this progress be seen and marked upon the coins of the United States? Aesthetics, or the science of the beautiful in nature and art, in its cultivation not only adorns but adds strength and dignity to national greatness. Let the coinage of our country, in its devices and artistic execution, meet the improved taste and higher cultivation of our advancing civilization. I propose to have prepared such devices as may improve the general appearance of our coins, retaining their general characteristics; to be used, if approved, in the event of a change, by legislation, in our national coinage.

## ABRADED COINS AS A LEGAL TENDER.

Having, as Director of the Mint, advantages of observing the defects of existing mint laws, or of such as are anticipated and pending, I beg leave respectfully to mention some points that occur to me as proper to place in an annual report:

1st. It seems a remarkable omission in our laws that there is no limit at which our coins shall cease to be a legal tender on account of wear. In England, the sovereign, or pound sterling, is not legally current when it has lost more than half a grain; although, by a recent examination of the state of the currency there, it appears that a large amount of coin is much lighter, especially in the countries remote from the capital. When the gold coin is offered at banking-houses, if not new, it is weighed, and received at a deduction proportionate to the loss. However, there was a time (nearly a century past) when the light gold

was called in and re-coined, the loss being made good by government, to the amount of over a half million of pounds sterling. And at this day the worn silver coin is kept up to legal weight in the same way without loss to private holders.

It has not been a serious trouble in this country, from the fact that our coin is so apt to be exported. And yet it makes difficulty at the custom houses and national treasuries, as we have had occasion to know. The collectors and treasurers hardly know what they are to do when coins much abraded are offered to them. In some sections, where gold is much used, as on the Pacific coast and in the extreme Southwest, the wear is very marked. Quarter-eagles may be met with not really worth more than \$2.40; and gold dollars still more deficient in proportion. It would be well to declare, by law, that gold coin shall be a legal tender at their stamped value, so long as they weigh within one per cent. for the smaller denominations, and one-half per cent. for the larger. But then the question arises, Who shall lose the difference when the coin becomes uncurrent?

2d. This brings us to a second point of discussion—a provision for keeping up the coins to legal weight, without laying the burden upon the last holder.

Whether it is positively right that the whole country should maintain the integrity of the country's coin, is a fair question for debate. That this should be the rule in regard to fractional silver coin, on which the Government makes a small gain, is a plain case enough. In regard to the gold, that could also be undertaken without great loss to the Treasury, if the plan which has been spoken of in England be adopted, to make a small diminution of weight, and consequently a small profit in the first issue. That is to say, suppose the Mint value of standard gold continue to be \$1,000 for 54½ ounces, at which rate any person bringing gold bullion or foreign coin would be paid in fine or standard bars or coin; but the Mint would make it into \$1,010, lawful coin, by a reduction of (say) 1 per cent. The difference could be reserved as a fund to enable the Mint at a future time to give out new pieces in exchange for worn and uncurrent pieces, at even tale. The English idea, however, was merely to pay the expense of coinage in this way. The difference would not suffice to cover all loss, but it would materially reduce the burden.

It is to be assumed that only the loss by *abrasion* should thus be made good; not the fraudulent lightening by boring, filing, clipping, filing, recutting. Persons who take such pieces must do so at their own risk.

There is some reason why the gross material should be of less value, weight for weight, than the articles which are made from it. But, on the other hand, it is a prolific source of confusion and misunderstanding, to have a difference in the value of an ounce of gold, according as it is found in a bar or in a coin. Still, the question of loss by wear should be met, and if ever there is to be an *international* coinage, there should be a joint engagement that each nation will keep up its own coins to the standard, or within reasonable bounds.

Here it may be allowable to say that the international system should be chiefly at a uniform *money of account*. Our coinage laws have carefully provided for "emblems of liberty," and the explanatory word "liberty" besides; and it is not likely that such coins would be welcome among peoples who are thus reminded of subjection. With us, public opinion is generally against the glorification of any man by placing his *name and effigy* on the coin; and if our President, and even our Washington, is excluded, we hardly wish to have emperors and kings thus

complimented among us. Still, no man will object to the occasional receipt of a gold coin of known value, be the portrait what it may, or the legend in what language soever.

This *money of account* should be based upon refined gold in bar; that is, upon a definite weight of fine gold, without reference to a standard for coin. Old names could be retained, but five dollars of account, twenty-five francs of account, and one pound sterling of account, should express the same amount. After this basis, if each country should make its coins nine-tenths fine, and in weight less than the bar rate, say, by 1 per cent., with a mutual guarantee to keep up the weight by recoinage, the coins would be passable for small sums beyond the lines; while for large transactions commercial houses would expect to pay and be paid in bar-gold. But within each country its own gold coin would be an unlimited legal tender at the stamped value; and this would tend to keep such coins at home, and secure a specie circulation as far as is desirable.

Some may think that to issue gold bars at one rate, and gold coin at a slightly different rate, would tend to check coinage. But this is not likely. The depositor of bullion would know no difference as to the tale value of his returns. The only difference would be that, if he wanted to hold specie for shipment, he would take bars; if he wanted it for home use or deposit in bank, he would take coin.

What has been said must not be taken as recommending such a system, but merely as a statement of the matter in its various bearings for further consideration. As already remarked, it does not originate here.

In general, the country's currency must always be, as it has been, chiefly in paper redeemable in gold. A perfect domestic money system, would seem to be, bank or Government notes for large payments; gold coin for occasional use in large or small; silver coins for the fraction of a dollar down to the tenth part; and an inferior alloy for smaller denominations.

Concurrently with this an issue of Treasury paper notes of one dollar, and a half dollar, always redeemable at the Treasury in silver coin, would be a great convenience for the transmission of small dues by mail, and for other purposes.

A currency of paper only, cheap and easily made, is a baseless fabric. It derives all its value from its being redeemable in the precious metals. The national scarcity of gold and silver, the difficulty of mining, and the cost of extracting and refining them, their noble qualities and their uses in various ways, give them a positive and high intrinsic value, and fit them to perform the office of money. On this point the wisdom of ages can never become foolish or obsolete.

#### TOKEN SILVER COINAGE.

3. A third point in which our monetary laws evidently require amendment is a reduction in weight of our silver coins, with competent guards as to the amount of issue and extent of legal tender, so as to insure us a metallic fractional currency, even if gold should ascend to a premium. This has been enlarged upon in a previous report, and need only be noticed here.

#### COUNTERFEIT AND IMITATION COINS.

Here it may be mentioned that an act passed June 8, 1864, supplied a real omission in the penal code, as regards the protection of the metallic currency. It provides (in brief) for the punishment of any who make or pass counterfeit coins in any metal or alloy, in the resemblance



of those of the United States or of foreign countries; or who make or pass coins of "original design" for the purpose of money. This last provision might seem to be useless, on the supposition that nobody would take a coin which was not an imitation. But the fact is quite otherwise, not only in respect to the baser coin, of which great quantities of *original design* were issued more than thirty years ago, and in later times; but also in regard to the precious metals, as recent facts have proved. I refer to small pieces designated as "half dollars" and "quarter dollars," with some claim to be considered gold coins, as they really contain as much of that metal as is to be found in common jewelry. The pieces which began to be issued in San Francisco, in 1859, and perhaps have been coined more recently, may not have been actually pushed into circulation, but may rather have served as play-pieces or curiosities. However, they were sold at their pretended value, while in fact the half dollar, weighing six grains on an average, and about 425 thousandths fine, was worth eleven cents; the quarter dollar nearly in the same proportion, some pieces being actually worth six cents. No doubt they have been imposed upon ignorant persons as real money. Their shapes were various, some octagonal, some circular.

A similar case has recently occurred of a large issue of "half dollars" from a private mint in Leavenworth, Kansas. On the obverse is a female head with thirteen stars, and the date 1871; on the reverse is a wreath inclosing the words, "Half dollar, Cal." The weight of a specimen tried here was 7.6 grains, and the fineness 520 thousandths, making a value of just seventeen cents. The case has been properly taken in hand by the judicial authorities of that district.

I may next speak of another fraud upon the gold currency, into which we have lately been making minute and extended examination. I refer to filing away the reeding on the edge or periphery, and then restoring it by a hand-tool; by which operation there is a gain of about fifty cents' worth, more or less, of gold-dust from each double eagle so dealt with. This has been done extensively on the Pacific coast, and has been punished by the courts. It requires some delicacy of touch to discover the difference; but the Treasury officers, custom-houses, and banks are very apt to check the circulation of such depreciated pieces.

The best preventive of this, probably, would be to abandon the reeding or reeding, and substitute some other impression on the edge. This reeding was made use of from the very first on our gold coins, being heretofore considered a good safeguard against filing or clipping. It has also been impressed upon our silver coins for about thirty five years past. Before that, the larger pieces had a periphery legend in sunken letters. Briefly to advert to the practice of some other nations, we find in England, as early as the reign of Charles the Second, the appropriate motto *Deus et Tutamen* running around the edge of the piece of two guineas, in raised letters. This was renewed in the double pound of George the Fourth. In the succeeding reign the edge of the gold coin was smooth, and during the reign of Victoria it has been uniformly reeded. In France, under the first Napoleon, the motto *Dieu Protège la France* was impressed in sunken letters. In the reign of Louis Philippe, and since, the same legend has appeared in relief. The gold coins of Prussia also have a periphery motto, incuse. In Belgium the legend is in raised letters.

A modification of the steam-press, so as to adapt it to the segment-cylindrical, would enable us to substitute letters for reeding, and evidently with much greater protection against the fraudulent reduction by filing, as well as against the practice of filling with a cheaper metal. The only

difference would be that the press could not move so rapidly, which, in the coinage of gold, is a matter of no moment.

#### REFINING BY CHLORINE.

The processes of refining and separating gold and silver have received an unusual share of attention and experiment during the past year, both at the Mint and the assay office at New York. At the latter, the sulphuric acid process has been fully and successfully established, and the noxious fumes neutralized. This is a very economical operation, although it does not always leave the gold and silver in the highest state of ductility. A method of refining silver has also been originated there, by which the work is done in the ordinary melting-pot, with the aid of bone-ash as an absorbent. This is a well-contrived and economical mode, and gives very good results.

At the Mint, the reverberatory furnace, or bone-ash test, formerly in use, has been restored to meet cases of refnage growing out of the peculiar character of some of our western bullion. The presence of sulphur, antimony, lead, and arsenic, one or all, frequently makes the Nevada silver brittle and refractory.

We have also been experimenting upon a pretty large scale with the chlorine-refining of gold, recently invented and perfected in Australia, and largely employed there and in New Zealand, and also coming into use in England. It answers the double purpose of parting out the silver and of removing the last traces of base metals which prevent the perfect malleability of gold. We had the advantage of the presence and management of the inventor, F. Boyer Miller, esq., assayer of the Sydney mint.

As the invention is a very remarkable one, and the process is likely to displace all others within the scope of its adaptation, I may briefly state that it is founded upon the eager affinity of chlorine for almost every metal, but generally less for gold than the others. The gas is generated by the action of muriatic acid on the black oxide of manganese, both very cheap materials. A current of this gas is conveyed by tubes into and down to the bottom of the melting-pot, while the mixed metals are in a state of fluidity. It seizes upon the baser metals, if any are present, and disperses them as volatile chlorides, copper forming the only exception. But in addition to that, the chlorine combines with the silver alloy, forming chloride of silver, which rises to the surface, the gold remaining in a purified condition beneath. The silver, holding the copper, if there is any, is protected from evaporation by a coating of borax on top of the melt. Absorption into the pot is also prevented by a previous coating of the same agent. The silver (argentic chloride) is taken off after the cooling in solid cakes, brought to the metallic state in a galvanic battery by an ingenious arrangement due to Mr. Leibins, also of the Sydney mint.

The chlorine acts somewhat upon the gold, so that about 2 per cent. of that metal is converted into a chloride, and rises with the silver. But this difficulty is overcome by the subsequent addition of a small quantity of metallic silver, on which the chlorine fastens by a greater affinity, and liberates the gold.

The peculiar merits of this process are, that it is cheap, rapid, and makes the most ductile gold. Its economy and quickness will be better understood when it is observed that in other processes, say the sulphuric or nitric, it is necessary to add to the gold, by a preliminary melting, nearly twice its weight, or four times its bulk, of silver, and to granulate

the mixture so as to enable the acid to have any action : and then, what with the parting and the subsequent recovery of the two metals, several days are consumed in the whole operation. But in the chlorine process no such addition of silver is required, the application being direct and simple, and a few hours will finish the work. The cost of materials and labor is much less than by any other method. The fine gold resulting from it, as shown by the experiments here, assayed from 994 to 997 thousandths, which is as high as is needed for commercial bars, and nearly as high as the results from sulphuric acid.

On the other hand, this process (chlorine) is not applicable to silver containing a small proportion of gold. So that when two kinds of bullion are presented, as is frequently the case at our mints and assay offices, namely, gold containing silver and silver containing gold, it is highly advantageous and a great saving to combine the two. In this case the sulphuric acid process is greatly to be preferred to any other. It seems desirable that we should have the benefit of both this and the chlorine; but the latter is a patented process, and, perhaps, cannot be obtained without legislative aid.

#### HUMID ASSAY.

The humid assay of silver, hitherto thought to be complete, has been still further perfected at the New York office, and here, by an admirable change in the mode of drawing and measuring the normal liquor. But we are to reason to take up with certain other suggestions for using the hydrosulphuric precipitant instead of the hydrochloric, or for working through the medium of yellow light. It is a mere affectation to carry the assay beyond the attainable degree of homogeneity in melting or purity in weighing at the assay balance.

It is a satisfaction to find that we can now have our delicate apparatus made in this country, and partly in our own house, so that we need no longer resort to London or Paris.

#### TABLE OF FOREIGN COINS.

The statement of the weight, fineness, and value of foreign coins, required by law to be made annually, will be found appended to this report. We have no alterations to report in this annual statement.

Mexican silver dollars of 1871, new devices, somewhat exceed the fineness reported in our tables, but it would not be safe to assess them at a higher value than therein stated.

We are expecting specimens of new European coins, which will illustrate the great changes of government that have recently occurred there; but as yet we have only some silver pieces of France, which conform to the style formerly issued under the republic. Germany, France, Spain, and Italy will all have a new coinage to show, at least in respect to devices.

#### MEDAL DEPARTMENT.

This department, organized a number of years ago, under the direction and by the authority of the Secretary of the Treasury, still continues in successful operation. A large number of medals have been made for the Government in the Indian Department, and many others have been made and sold. This department is not only profitable but a credit to the Government. It should be encouraged.

#### THE MINT CABINET.

This cabinet of coins and medals has been visited during the past year by more than fifty thousand persons from our own and other countries.

It is a place of great attraction, and well repays the visitor. The annual appropriation for this cabinet should not only be continued but increased.

#### STATISTICAL TABLES.

The statistics relating to the deposits of bullion and coinage at the Mint of the United States and branches will be found in the tabular statement hereto annexed. These tables have been prepared with great care, and every effort made to correct and avoid mistakes. They are believed to be trustworthy and accurate.

Very respectfully, your obedient servant,

JAS. POLLOCK, *Director.*

Hon. GEO. S. BOUTWELL,

*Secretary of the Treasury, Washington, D. C.*

#### REPORT OF SUPERINTENDENT OF U. S. COAST SURVEY.

COAST SURVEY OFFICE,  
*Washington, D. C., September 22, 1871.*

SIR: I have the honor to present, as usual, in advance of the detailed report, a synopsis showing the distribution of surveying parties on the coasts of the United States during the year which will end with the month of October. Two working seasons are included in that period, one at the North, and the other on southern sections of the coast, work generally closing on the coast of New England early in November.

My previous detailed report includes mention of the work done in the autumn of the year 1870. The abstract now submitted will include the subsequent operations. Of these, nearly all that concern places on the Atlantic coast north of Chesapeake entrance are now in progress, and field-work in those sites will continue, as before stated, until the month of November.

Following with notices in the usual geographical order, a topographical and a hydrographic party are now at work in Southwest Harbor, (Mount Desert Island,) on the coast of Maine; and if practicable, Mooseabec Reach and Goldsborough Bay will be sounded this season. The plane-table survey is in progress on the western shore of Penobscot Bay, and on the adjacent islands, including Isleborough, Isle au Haut, and the Fox Islands, three parties are engaged. Another is sounding Isle au Haut Bay. Tidal observations have recorded each rise and fall during the year at North Haven. Farther westward the work now in hand includes topography and hydrography of the Kennebec and Androscoggin Rivers; triangulation near the primary station, Sebattis; coast topography between Saco entrance and Richmond's Island; and additional soundings at several places between Portland and Plymouth Harbor. The tides of the year have been recorded regularly at Charlestown navy yard, near Boston. Special observations have been made at Edgartown Harbor, Massachusetts, with reference to the development of the laws which bring about physical changes at port entrances along the coast of New England. Plane-table work, continued during the winter, has completed the survey of Narragansett Bay, and the same party is now on the coast westward of Point Judith; another is at work near New Haven, Connecticut, points for the plane-table survey having been determined near midsummer. The survey of Lake Champlain is in progress northward of the limits reached last year, and also the connection of that survey by triangulation with adjacent geodetic stations of the Atlantic coast. The work here referred to incidentally determines points for the State surveys of New Hampshire and Vermont, as authorized in the ap-

appropriation bill for the present fiscal year, and a party is now engaged in that service. Another is employed in reconnaissance for stations to connect the triangulation of the lake with that of Hudson River. In the vicinity of New York a party has inspected and secured the triangulation marks on the shores of Long Island Sound; another has extended soundings in Newark Bay; and observations will be continued for determining the nature of the physical changes which affect New York Harbor. Daily tidal observations have been recorded during the year at that port.

On the coast of New Jersey a topographical and a hydrographic party are engaged in the survey of Little Egg Harbor; another party is in the field for triangulation between Mount Holly and Barnegat Light-house. The special survey at the confluence of the Delaware and Schuylkill Rivers will be completed by the end of the present working season. Latitude and azimuth have been determined at Calvert Station, at Tangier Island, and at Wolf Trap, on Chesapeake Bay; and a party is assigned to select stations for connecting the bay triangulation with that of the Atlantic coast across the peninsula of Virginia. The survey of the estuaries of the Chesapeake has been continued, and the Broad Water north of Cape Charles has been developed. All the tides of the year at Old Point Comfort have been recorded. Magnetic observations have been repeated at the station in Washington City. Triangulation has been extended on the James River, Virginia, and the primary work passing southward of Washington, along the Blue Ridge, is in progress.

In the lower sections of the Atlantic coast the operations of the year include triangulation over Pamlico Sound, North Carolina, and the determination of latitude and azimuth at the Ocracoke base line; the topography and hydrography of Pamlico River; survey of the coast above and below Bogue Inlet, North Carolina; off-shore hydrography south of Cape Hatteras; plane-table survey and soundings, embracing parts of the Chowhessie, Colleten, Maskey's, May, Cooper, Bull, and Commerce Rivers, in South Carolina; the hydrography of St. Mary's River, Georgia, and of the coast approaches southward to the mouth of St. John's River, Florida, with the inland sea channels between St. Mary's and Nassau Sound; the topography of Nassau Sound and of the coast above it; triangulation of the eastern side of Florida south of Matanzas Inlet; hydrography of the western end of the Florida Reef north of the Tortugas and Quicksands, including the development of a large bank in that vicinity.

In the Gulf of Mexico soundings have been made near Apalachicola entrance; the triangulation and topography are complete in St. Andrew's Bay; determinations have been made there for latitude and azimuth; Santa Rosa Sound has been developed eastward from Pensacola entrance, the surveys being now continuous. To the westward the work of the year embraces the extension of the survey of Isle au Breton Sound, and of the Mississippi River above the head of the passes; soundings in Lake Pontchartrain and in the Gulf approaches to the South Pass and Southwest Pass of the Mississippi. Trinity Shoal, in the Gulf, to the westward of the Delta, has been surveyed for light-house purposes. On the coast of Texas the hydrography of Matagorda Bay and its branches has been completed.

In the vicinity of St. Louis, and in Illinois, Ohio, and Kentucky, points have been determined in the triangulation which has been authorized for connecting the survey of the Atlantic coast with that of the Pacific. This work is yet in progress.

On the western coast most of the field operations are yet in hand.

The steamer under construction for service in the western sections not being yet completed, only partial observations have been practicable in the hydrographic reconnaissance between Panama and San Diego. The plans of the year, under which parties are now in the field, include the determination of latitude and longitude at Cape San Lucas; the longitude of San Diego; topography near San Pedro, California; the latitude and longitude of Santa Barbara; topography of the coast of California, near Point Conception; San Luis Obispo and San Simeon; and of the Santa Barbara Islands; reconnaissance for extending the triangulation south of Monterey; the hydrographic development of Falmouth Shoal, and of the vicinity of a rock off the Farallones, and additional soundings in San Francisco entrance; the tracing of wharf lines at Oakland; topography near Point Arena, and of the coast south of Cape Mendocino, California; the longitude of Eureka; topography near Crescent City; the latitude and longitude of Yaquina, on the coast of Oregon; topography north and south of Columbia River entrance, and of the river shores above Three-Tree Point.

In Washington Territory the survey is in progress on the west side of Whidby Island, and on the shores of Admiralty Inlet. The hydrography in that quarter will develop, in the course of the season, Lawson Shoal and the vicinity of Belle Rock in Rosario Strait. At Seattle the longitude will be determined by the telegraphic method.

When the appropriation for the present fiscal year became available, a party, previously organized, was sent from San Francisco without delay, to make such development in hydrography and such other observations of interest and value as may be practicable in the vicinity of the Aleutian Islands, off the coast of Alaska. The party sailed in August, but time has not yet elapsed for advice of the arrival of the vessel at her destination.

Within the year laborious computations have been completed, giving final values for the longitude of points intermediate between the Atlantic and the Pacific coast. Of these the principal ones are Omaha, Salt Lake City, and San Francisco. Computations are in progress for determining the transatlantic longitude, which depends upon the observations made last year at Brest and Duxbury.

The discussion is continued of full series of tidal observations, with reference to the construction of tables of prediction.

In the Coast Survey Office the operations of the several divisions have kept pace with the field-work. Twenty new charts have been published, including three new editions of charts made needful by extensive changes. Fifty-eight charts have been in hand in the drawing division, of which nine were commenced within the year. Of the various engraved charts about ten thousand copies have been printed, and an equal number of copies distributed from the office. Of the manuscript maps on file in the archives sixty-six have been copied or traced within the year, to meet calls for information from various branches of the public service.

Tide-tables for the ports of the United States for the year 1872 have been computed and issued from the office.

In the hydrographic division special care has been taken in regard to the marked places of buoys on the published charts. Most of the sea-marks liable to shift have been carefully determined in position, and marked on the charts which admitted of such changes without detriment to the sailing directions.

In conformity with the act of Congress approved July 15, 1870, for observing the solar eclipse of December 22, 1870, in Europe, several parties were organized under my direction, and occupied stations in

Sandy and in Spain. As the weather was unfavorable, generally, along the line on which the eclipse was total, it is gratifying that the sky was least obscured at the stations selected for the several observers. Full reports have been received from the leading members of the expedition, and results of much interest are expected from the discussion of the observations.

This recapitulation of the operations of the year in part explains the object of the estimates which have been submitted for continuing the survey of the coast.

Respectfully submitted.

BENJAMIN PEIRCE,

*Superintendent United States Coast Survey.*

HON. GEO. S. BOUTWELL,

*Secretary of the Treasury.*

## REPORT OF THE LIGHT-HOUSE BOARD.

TREASURY DEPARTMENT.

*Office Light-House Board, September 25, 1871.*

SIR: By your direction the following report of the operations of this Board, during the last year, is respectfully submitted:

The detailed statements under the heads of the respective districts, based mainly upon the annual reports of the Engineers and Inspectors, embrace the work which has been done; that which has been laid out for the current year; and the present condition of all the aids to navigation, with such remarks and recommendations in regard to improvement of existing and the establishment of such new aids as seem to require the attention of Congress at this time.

The Light-houses and Light-vessels (so far as the exhibition of efficient Lights is concerned) are, it is believed, equal to any in the world, and these beacons and buoys actually in position are efficient day-marks to guide clear of the obstructions for which they were established. For these Light-stations at which extensive repairs and renovations are needed, special appropriations are recommended.

The aggregate estimates for the fiscal year ending June 30, 1873, are \$47,000 in excess of the appropriations for the fiscal year ending June 30, 1872, and \$358 less than the estimates of last year.

The special items in excess, in the estimates of general expenses, over the actual appropriation for the current fiscal year, are for buoyage and for expenses of Fog-signals. The sum estimated for the buoy service is the same that has been submitted for several years past, owing to the great increase in the numbers of those aids to navigation, especially on the Southern, Gulf, and Pacific coasts, and the failure to make the increased appropriation (\$25,000) asked for two years since, made it necessary to apply for a deficiency appropriation, part of which was made.

The other item of increase (\$20,000) for expenses of Fog-signals, arises from the large number of those aids to navigation authorized within the last two years.

Of the large number of Lights and other aids to navigation for which appropriations have been made, such as are established on sites belonging to the Government, and those where valid titles, according to law, in cases in which land had to be purchased, have been obtained, the works have been commenced or completed. Great difficulty is experienced in perfecting titles to sites for Light-houses, and building them within the limited time appropriations are available. It not unfrequently happens

that the title-papers of a site for a Light-house, costing only a few hundred dollars, remain in the hands of the law officers for many months before the validity of the title is reported upon, and then, very often, in consequence of some legal omission or informality, the papers have to be returned to the United States attorney for further investigation.

The two small sailing-vessels which have been employed for many years in delivering oil and other Light-house supplies on the Atlantic and Gulf coasts are too much decayed to be economically repaired after the present year, and an estimate for building two new vessels for that service has been submitted in the estimates for next year.

#### FIRST DISTRICT.

The First District extends from the northeastern boundary of the United States, (Maine,) to and including Hampton Harbor, New Hampshire.

*Inspector*.—Commander A. E. K. Benham, United States Navy.

*Engineer*.—Brevet Brigadier General J. C. Duane, Lieutenant Colonel of Engineers, United States Army.

In this district there are:

Light-houses and lighted beacons .....	4
Day, or unlighted beacons .....	50
Buoys actually in position .....	329
Spare buoys for relief, and to supply losses .....	177
Tender, steamer <i>Iris</i> .....	1
Tender, steam launch, <i>Mary</i> .....	1
Tender, (sail,) schooner <i>Wave</i> .....	1

The following numbers, which precede the names of stations, correspond with those of the "Light-house List of the Atlantic, Gulf, and Pacific Coasts of the United States," issued January 1, 1871.

#### LIGHT-HOUSES AND LIGHTED BEACONS.

*Burnt-Coat Harbor*, Swan's Island, coast of Maine.—In consequence of difficulty in obtaining title to the land, it will probably be impossible to complete the Light-house before the 1st of July next, and it is therefore recommended that the money may be re-appropriated.

21. *White Head*.—Repairs are being made to the main part of the keeper's dwelling; a road has been graded from the landing to the Fog-signal house; a coal-shed erected, and a wharf is being built.

*Halfway Rock*, Casco Bay, Maine.—On the 30th of June, 1870, the balance on hand for the construction of this work having reverted to the Treasury, the construction of the work was discontinued, and the machinery and material removed and stored. As soon as the new appropriation became available the work was resumed. The tower has been completed, and all that now remains to be done is the roofing of the lantern and the introduction of the apparatus. The station will be lighted on the 15th of August. It is proposed, during the present season, to build a substantial masonry boat-house and establish a Fog-signal.

40. *Cape Elizabeth*, coast of Maine.—The westerly tower of the two, at this Light-station, was built in 1828 of *rubble stone*, and is now in such a state as to render it necessary to rebuild it in a better manner, for which an estimate has been submitted in the annual estimates. The station is one of the most important on the eastern coast, serving the double purpose of a sea-coast Light-station, and as a mark for the entrance into Casco Bay and to Portland Harbor.

43. *Whale's Back*.—The masonry of the new tower has reached the height of twenty feet above low-water mark. The position is one of the most difficult to work upon on the coast, as the rock is covered by the



waves, except at low water, and is exposed to the full force of the Atlantic. The new structure will be a masonry tower, solid to the height of twenty feet above low-water mark, and the blocks of granite which will form a facing for the interior mass of concrete will be tied together by dove-tail joints, as is usual in similar sea structures. The diameter of the tower at the base will be twenty-seven feet, and height of focal plane above the sea will be sixty-eight feet.

4. *Portsmouth Harbor*.—A new keeper's dwelling is being erected.

At each of the following-named Light-stations there have been repairs and renovations, more or less extensive, during the year, viz:

1. *St. Croix*, on Dochet's Island, St. Croix River, Maine.
2. *West Quoddy Head*, west entrance to Passamaquoddy Bay.
3. *Little River*, west side of entrance to harbor.
4. *Libby Island*, entrance to Machias Bay.
5. *Moose Peak*, on Moosepeak Head.
6. *Nash's Island*, west end of Moosepeak Reach.
7. *Narraguagus*, entrance to Narraguagus Bay.
8. *Petit Menan*, on Petit Menan Island.
9. *Prospect Harbor*, east side of entrance to Prospect Harbor.
10. *Winter Harbor*, west side of entrance to Winter Harbor.
11. *Mount Desert*, on Mount Desert Rock.
12. *Baker's Island*, southwest side entrance to Frenchman's Bay.
13. *Bear Island*, east side entrance to northeast harbor.
14. *Bass Harbor Head*, east side entrance to Bass Harbor.
15. *Edgemoggin*, near east end of Edgemoggin Reach.
16. *Saddleback*, in Isle au Haute Bay.
17. *Heron Neck*, west entrance to Carver's Harbor.
18. *Deer Isle*, west entrance to Thoroughfare.
19. *Eagle Isle*, west side of Isle au Haute Bay.
20. *Pumpkin Isle*, west entrance to Edgemoggin Reach.
21. *Matinicus*, off Penobscot Bay.
22. *Owl's Head*, west side of Muscle Ridge Channel, Penobscot Bay.
23. *Brown's Head*, south side of west entrance to Fox Islands Thoroughfare.
24. *Negro Island*, south side of entrance to Camden Harbor.
25. *Grindle's Point*, north side of entrance to Gilkey's Harbor.
26. *Dice's Head*, north side of entrance to Castine Harbor.
27. *Fort Point*, west side of entrance to Penobscot River.
28. *Tenant's Harbor*, south side of entrance to Tenant's Harbor.
29. *Marshall's Point*, east entrance to Herring Gut.
30. *Manheigan*, off George's Islands.
31. *Franklin Island*, on east side of west entrance to George's River.
32. *Pemaquid*, on Pemaquid Point.
33. *Burnt Island*, west side of entrance to Townsend Harbor.
34. *Hendrick's Head*, east side of entrance to Sheepscot River.
35. *Pond Island*, west side of entrance to Kennebec River.
36. *Seguin*, off Kennebec River.
37. *Cape Elizabeth*, on southwest side of Casco Bay.
38. *Portland Head*, on southwest side of entrance to Portland Harbor.
39. *Portland Breakwater*, on outer end of Breakwater, Portland Harbor.
40. *Wood's Island*, west side of entrance to Saco River.
41. *Goat Island*, east side of entrance to Cape Porpoise Harbor.
42. *Boone Island*, off York Harbor.
43. *Isle of Shoals*, on White Island, off Portsmouth.

The following-named Light-stations require repairs to be made during the current and ensuing year :

1. *St. Croix.*
2. *West Quoddy Head.*
4. *Libby Island.*
6. *Nash's Island.*
7. *Narraguagus.*
8. *Petit Menan.*  
*Prospect Harbor.*
9. *Winter Harbor.*
10. *Mount Desert.*
11. *Baker's Island.*
12. *Bear Island.*
13. *Bass Harbor Head.*
14. *Edgemoggin.*
15. *Saddleback.*
16. *Heron Neck.*
18. *Eagle Island.*
19. *Pumpkin Isle.*
20. *Matinicus.*
21. *White Head.*
22. *Owl's Head.*
23. *Brown's Head.*
24. *Negro Island.*
25. *Grindle's Point.*
26. *Dice's Head.*
27. *Fort Point.*
28. *Tenant's Harbor.*
29. *Marshall's Point.*
30. *Manheigan.*
31. *Franklin Island.*
32. *Pemaquid.*
33. *Burnt Island.*
34. *Hendrick's Head.*
35. *Pond Island.*
36. *Seguin.*
37. *Cape Elizabeth.*
38. *Portland Head.*
40. *Wood Island.*
41. *Goat Island.*
42. *Boone Island.*
44. *Portsmouth Harbor.*
45. *Isle of Shoals.*

#### DAY OR UNLIGHTED BEACONS.

Names and positions of the day or unlighted beacons in the first district :

No. 1. *Jerry's Point*, Portsmouth Harbor.—Iron beacon. In good condition.

No. 2. *South Beacon*, Portsmouth Harbor.—Stone beacon. In good condition.

No. 3. *North Beacon*, Portsmouth Harbor.—Wooden mast. In good condition.

No. 4. *Willey's Ledge*, Portsmouth Harbor.—Iron spindle. In good condition.

No. 5. *York Ledge*, off York River.—Iron spindle. In good condition.  
 No. 6. *Fishing Rocks*, Kennebunkport.—Iron spindle. Broken off. Spar-buoy substituted.

No. 7. *Stage Island Monument*, entrance to Saco River.—Stone tower forty feet high. In good condition.

No. 8. *Sharp's Rocks*, entrance to Saco River.—Iron socket and wooden shaft. Socket broken off. Spar-buoy placed to mark the danger.

No. 9. *Back Cove Beacon*, Portland Harbor.—Pile beacon. In good condition.

No. 10. *White Head Ledge*, in White Head passage to Portland Harbor.—Iron spindle slightly bent under the cage, in good condition otherwise.

No. 11. *Trott's Rock* in the above passage.—Iron spindle broken off within a few feet of the ledge.

No. 12. *Mark Island Monument*, Casco Bay.—Stone tower fifty feet high. In good condition.

No. 13. *Black Jack Rock*, Kennebec River.—Iron socket, wooden shaft; broken off.

No. 14. *Seal Rock*, Kennebec River.—Iron spindle with copper cylinder, painted black. In good condition.

No. 15. *Lee's Rock*, Kennebec River.—Iron and wood broken; a spar-buoy is placed to mark the danger.

No. 16. *Liam Island Ledge*, Kennebec River.—Iron socket and wooden shaft. In good condition.

No. 17. *Winslow's Rocks*, Kennebec River.—Iron socket, wooden shaft; broken off. Spar-buoy substituted.

No. 18. *Ames's Ledge*, Kennebec River.—Iron socket, wooden shaft. In good condition.

No. 19. *Deef Rock*, Kennebec River.—Iron socket, wooden shaft. In good condition.

No. 20. *Line Rock*, Back River.—Iron socket, wooden shaft. In good condition.

No. 21. *Carleton's Ledge*, Back River.—Iron socket, wooden shaft. In good condition.

No. 22. *Clough's Rock*, Sheepscot River.—Iron socket, wooden shaft. In good condition.

No. 23. *Merrill's Ledge*, Sheepscot River.—Iron socket, wooden shaft. In good condition.

No. 24. *Yellow Ledges*, Penobscot Bay.—Iron shaft, copper cylinder. In good condition.

No. 25. *Garden Island Ledge*, Penobscot Bay.—Iron shaft, copper cylinder and one ball. Shaft good, cylinder partially broken away and ball gone.

No. 26. *Otter Island Ledge*, Penobscot Bay.—Iron shaft, copper cylinder and two balls. Shaft bent, cylinder partially broken away, and one ball gone.

No. 27. *Ash Island Point*, Penobscot Bay.—Iron socket, wooden shaft. In good condition.

No. 28. *Dodge's Point Ledge*, Penobscot Bay.—Wooden mast twelve feet long. In good condition.

No. 29. *Potters-field Ledge*, Penobscot Bay.—Stone beacon. In good condition.

No. 30. *Lowell's Rock*, Penobscot Bay.—Iron spindle and cage. In good condition.

No. 31. *Seaf's Ledge*, Penobscot Bay.—Iron spindle and cage. In good condition.

No. 32. *Harbor Ledge*, Penobscot Bay.—Stone beacon. In good condition.

No. 33. *Shipyard Ledge*, Penobscot Bay.—Iron spindle; broken off. Not necessary.

No. 34. *Fiddler's Ledge*, Penobscot Bay, near west entrance to Fox Island Thoroughfare.—Stone beacon. Two or three stones of the upper course are out of place; otherwise, in good condition.

No. 35. *North Point of Northeast Ledge*, Camden Harbor.—Iron spindle. In good condition.

No. 36. *Morse's Point Ledge*, Camden Harbor.—Iron spindle. In good condition.

No. 37. *Hosmer's Ledge*, Castine Harbor.—Stone monument. In good condition.

No. 38. *Steel's Ledge*, Belfast Harbor.—Stone beacon. In good condition.

No. 39. *Fort Point Ledge*, Penobscot River.—Stone beacon. In good condition.

No. 40. *Odom's Ledge*, Penobscot River.—Stone beacon. In good condition.

No. 41. *Buck's Ledge*, Penobscot River.—Iron beacon. In good condition.

*Centre Harbor Ledge*, in Centre Harbor, near east end of Edgemoggin Reach, three feet out at low water.—Iron socket with wooden shaft, twenty-five feet high, and cask at top painted black, (new.) In good condition.

No. 42. *Ship and Barges*, Blue Hill Bay.—Iron socket, wooden shaft thirty feet, and cask. In good condition.

No. 43. *Bunker's Ledge*, Mount Desert.—Stone beacon. In good condition.

No. 44. *Half-tide Ledge*, Narraguagas Harbor.—Iron socket, wooden shaft and cask. In good condition.

No. 45. *Norton's Reef*, Pleasant River.—Iron tripod and shaft, ball at top. In good condition.

No. 46. *Snow's Rock*, Moosepeak Reach.—Iron socket, wooden shaft. In good condition.

No. 47. *Gilchrist Rock*, Moosepeak Reach.—Iron shaft. In good condition.

No. 48. *Moose Rock*, Moosepeak Reach.—Iron tripod. In good condition.

No. 49. *Western Bar*, Lubec Narrows.—Wooden crib filled with stone. Being rebuilt.

No. 50. *The Ledge*, St. Croix River.—Wooden crib filled with stone. In good condition.

The beacons on *Fishing Rocks*, Kennebunkport; *Sharp's Rocks*, Saco River; *Lee's Rock* and *Winslow's Rocks*, Kennebec River, were broken off by ice and other casualties, and their places supplied with spar-buoys.

The steam-whistles in this district are in good working order, and are highly spoken of by persons navigating this coast.

## SECOND DISTRICT.

The Second District extends from Hampton Harbor, New Hampshire, to include Gooseberry Point, Massachusetts.

*Inspector*.—Commander John J. Walker, United States Navy.

*Engineer*.—Brevet Brigadier General J. C. Duane, Lieutenant Colonel of Engineers, United States Army.

In this district there are—

Light-houses and lighted beacons .....	58
Day or unlighted beacons .....	49
Light-vessels, (including one for relief).....	9
Buoys actually in position .....	500
Spare buoys for relief and to supply losses.....	273
Tender (steam) <i>Verbera</i> .....	1

The numbers preceding the names of stations correspond with those of the "Light-house List of the Atlantic, Gulf, and Pacific Coasts of the United States," issued January 1, 1871.

#### LIGHT-HOUSES AND LIGHTED BEACONS.

**46. Newburyport Harbor, Massachusetts.**—The fifth-order lens has been removed and a fourth-order substituted. A new keeper's dwelling is being erected. This Light-station was first established in 1790, and the beacon-light, designed to serve as a range for entering the harbor, or for reaching a safe anchorage at night,) was erected in 1816. The tower of the main Light is a low, octagonal wooden structure, and the beacon must necessarily be so constructed as to allow it to be moved from one side to another in front of the main Light, as changes take place on the bar and in the outer channel.

Newburyport is a place of sufficient importance to justify the establishment of a more powerful light than the present one, and the erection of buildings of better materials than wood.

It is recommended that the temporary wooden structure on which the main Light is situated be replaced by a permanent cast-iron tower, supported on a concrete base, extending below the low-water line.

Should any future change in the formation of the site require the removal of the tower, this may be effected with little more expense than that of making a new concrete base.

The citizens of Newburyport have for several years maintained by subscription two range lights to guide vessels in the inner harbor, and they have lately petitioned the Government to take charge of them. Should this petition be granted it will be necessary to erect two small structures near the sites of the present lights. As a further aid to navigation entering this difficult harbor, it is recommended that a day beacon be erected on Black Rock, near the entrance. This point is at present marked by a spindle, which will probably sooner or later be carried off by the ice; moreover it does not sufficiently mark the rock in the night.

Estimated cost of main Light-house.....	\$70,000
Estimated cost of two range-lights.....	10,000
Estimated cost of day-beacon .....	6,000
Total .....	86,000

**52. Cape Ann, Massachusetts.**—A steam Fog-signal has been placed at this station. The towers are being repointed and buildings repaired.

**Hospital Point, Salem Harbor, Massachusetts.**—This new Light was exhibited from a temporary building on May 1, 1871. Permanent buildings are now being erected.

**Fort Pickering, Salem Harbor, Massachusetts.**—This new Light was exhibited on January 17, 1871.

**Larby Wharf, Salem Harbor, Massachusetts.**—This new Light was exhibited on January 17, 1871.

59. *Boston, Massachusetts.*—Two frame buildings for Fog-signals have been erected. The floor of the room for the storage of oil has been relaid.

60. *Narrows, entrance to Boston Harbor, Massachusetts.*—The tower-platform, railing and posts, and window-shutters and doors have been thoroughly repaired and all the iron-work has been scraped and painted. The ice-breaker has also been thoroughly repaired. A fifth-order lens will be substituted for the present sixth-order.

62. *Plymouth, "The Gurnet," entrance to Plymouth Harbor, Massachusetts.*—These Lights are of the sixth order and are entirely too small; they may readily be mistaken for the lights in a dwelling-house, when they can be seen at all, and the distance apart, thirty-one feet, is altogether too short to afford an efficient range. It is recommended to replace them by two fourth-order Lights, separated by a proper distance for an effective range. The estimated cost is \$25,000.

*Duxbury Pier, entrance to Plymouth, Duxbury, and Kingston Harbors, Massachusetts.*—Four sections of the tower have been erected, bringing it to a height of thirty-six feet, and the base filled with concrete to a height of twenty feet. The structure will be a tower twenty-five feet in diameter at the base, with a height of fifty feet focal plane. It is founded in two feet of water at low tide, and is of concrete, faced with iron. The run of ice is very severe from Plymouth Harbor, and to resist it, and the heavy seas by which it will be assailed, the tower will be built in one solid mass to a height of fifteen feet above the water. It is expected that the entire work will be completed by the end of the current fiscal year.

72. *Monomoy Point.*—The Light at this station, which is of the fourth order, on a tower about forty feet high, was originally intended as a guide to *Old Stage Harbor*. The harbor has been filled with sand, and cannot now be entered, and the Light is therefore of no further use for that purpose. But inasmuch as nearly all vessels (both steamers and sailing) plying between New York and the eastern ports pass this point, and have now no other guide than the Light-ships, which cannot be seen a sufficient distance, it is considered a matter of the greatest importance that this Light should be replaced by one of sufficient power to guide vessels safely through this intricate passage. For this purpose there is recommended a second-order Fixed Light, varied by red flashes, for which an estimate is submitted.

80. *Nantucket Beacon.*—Land has been purchased for a site for a keeper's dwelling, and the dwelling is now being erected. The beacon will also be removed to this lot.

At each of the following-named stations there have been repairs more or less extensive during the last year:

47. *Newburyport Beacon, Merrimack River.*
48. *Ipswich, entrance to Ipswich Harbor.*
49. *Ipswich, beacon, Ipswich Harbor.*
50. *Annisquam, Annisquam Harbor.*
51. *Straitsmouth, Straitsmouth Island.*
53. *Eastern Point, Gloucester Harbor.*
54. *Ten Pound Island, Gloucester Harbor.*
55. *Baker's Island, Salem Harbor.*
56. *Marblehead, Marblehead Harbor.*
57. *Egg Rock, off Nahant.*
58. *Minot's Ledge, in Boston Bay.*
61. *Long Island Head, Boston Harbor.*

62. *Plymouth*, entrance to Plymouth Harbor.
63. *Race Point*, Cape Cod.
64. *Long Point*, Cape Cod.
65. *Mayo's Beach*, Wellfleet Bay.
66. *Billingsgate*, entrance Wellfleet Harbor.
67. *Sandy Neck*, Barnstable Bay.
68. *Cape Cod*.
69. *Nanset Beach Beacon*, Cape Cod.
70. *Chatham*, Chatham Harbor, Cape Cod.
71. *Pollock Rip Light-vessel*.
72. *Monomoy Point*, Cape Cod.
73. *Shoreful Light-vessel*.
74. *Handkerchief Light-vessel*.
75. *Nantucket*, (Great Point.)
76. *Sankaty Head*, Nantucket.
77. *South Shoal Light-vessel*.
78. *Gay Head*, Martha's Vineyard.
79. *Brant Point*, Nantucket.
80. *Nantucket Cliff Beacons*.
81. *Bass River*, Vineyard Sound.
82. *Bishop & Clerk's*, Vineyard Sound.
83. *Hyannis*, Vineyard Sound.
84. *Cross Rip Light-vessel*.
85. *Cape Poge*, Martha's Vineyard.
86. *Succonessett Light-vessel*.
87. *Edgartown*, Martha's Vineyard.
88. *Holmes' Hole*, Martha's Vineyard.
89. *Nobsque*, Wood's Hole.
90. *Tarpaulin Cove*, Naushon Island.
91. *Vineyard Sound Light-vessel*.
92. *Hen and Chickens Light-vessel*.
93. *Cuttyhunk*, Buzzard's Bay.
94. *Clark's Point*, New Bedford Harbor.
95. *Palmer's Island*, New Bedford Harbor.
96. *Ned's Point*, Mattapoissett Harbor.
97. *Bird Island*, Sippican Harbor.
98. *Wing's Neck*, Buzzard's Bay.

The following-named Light-stations require repairs to be made during the ensuing year:

48. *Ipswich*.
52. *Cape Ann*.
61. *Long Island Head*.
72. *Monomoy Point*.
83. *Bishop & Clerk's*.
98. *Palmer's Island*.
51. *Straitsmouth*.
57. *Egg Rock*.
63. *Race Point*.
81. *Cliff Beacons*.
96. *Dumpling Rock*.

#### DAY OR UNLIGHTED BEACONS.

Names and positions of the day or unlighted beacons in the Second District:

No. 1. *Old Cock*, Buzzard's Bay, iron spindle, thirty-six feet high, w cage at top.

No. 2. *Egg Island*, Buzzard's Bay.—Granite cone with iron spindle, vane at top.

No. 3. *Range Beacon*, Fairhaven Fort Point.—Boiler-iron triangular pyramid, forty feet high.

No. 4. *Cormorant Rocks*, south side of entrance to Mattapoisett Harbor, Buzzard's Bay.—Iron spindle, twenty-six feet high, with cage at top.

No. 5. *Lone Rocks*, northeast entrance to Wood's Hole.—Iron spindle, cage at top.

No. 6. *Collier's Ledge*, entrance Centreville Harbor, Vineyard Sound.—Granite base, iron spindle, ball and vane.

No. 7. *Great Rock*, west of Point Gammon, Vineyard Sound.—Iron spindle, twenty-six feet high, cage at top.

No. 8. *Hyannis Breakwater*, east end.—Wooden spindle, four arms and cask at top.

No. 9. *Sunken Pier*.—Wooden spindle, cask at top, on northeast part of Bass River Bar.

No. 10. *Spindle Rock*, entrance to Edgartown Harbor.—Iron spindle, cask at top.

No. 11. *Billingsgate Shoal*, old site.—Timber beacon, fifteen feet high, with fifteen feet masts and slats across.

No. 12. *Egg Island Rock*, entrance to Wellfleet Harbor.—Wooden spindle, cask at top.

No. 13. *Duxbury Beacon*, square, granite, with four-foot granite post on top.

No. 14. *Breakwater Beacon*.—Square open-work granite, with wooden spindle.

No. 15. *Hogshead Beacon*.—Iron spindle with arm, cask and cage at top.

No. 16. *North Beacon*, entrance Scituate Harbor.—Iron spindle with two rounds.

No. 17. *South Beacon*, entrance Scituate Harbor.—Iron spindle with two lozenges.

No. 18. *Londoner*, off Thatcher's Island, Cape Ann.—Iron spindle forty-five feet high, with cage at top.

No. 19. *Point Alderton*.—Square granite pyramid with cone at top.

No. 20. *False Spit*.—Granite base with iron spindle and cage.

No. 21. *Spit Beacon*.—Square granite pyramid.

No. 22. *Nix's Mate*.—Square granite base with octagonal pyramid.

No. 23. *Great Farm Bar*.—Square granite base and granite cone with iron spindle and cage at top.

No. 24. *Deer Island Point*.—Square granite pyramid.

No. 25. *Bird Island Beacon*, southeast point of Bird Island.—Iron spindle with cage at top.

No. 26. *Sunken Island*.—Open-work granite base, with wooden spindle and cage at top.

No. 27. *Pig Rocks*.—Granite pyramid, ten feet square at base, twenty feet high, with wooden mast and square cage at top. (Rebuilt this season.)

No. 28. *Half tide Rock*.—Wooden shaft forty feet high, with cask at top.

No. 29. *Cat Island Beacon*.—Wooden spindle.

No. 30. *Marblehead Rock*.—Conical, granite, with wooden spindle.

No. 31. *Little Aquaviva*, entrance Salem Harbor.—Granite, with wooden spindle and cage at top.

No. 32. *Great Aquaviva*, entrance to Salem Harbor.—Granite, with wooden spindle and cage at top.



- No. 33. *Hardy's Rock*.—Wooden spindle, with two triangles at top.
- No. 34. *Bowditch Beacon*.—Triangular pyramid of granite, with wooden spindle and cage at top.
- No. 35. *Halfway Rock*.—Granite beacon in ruins.
- No. 36. *Little Haste*.—Wooden mast thirty-five feet high, with cask at top.
- No. 37. *Abbott's Monument*.—Square, granite, with wooden mast and cage at top.
- No. 38. *Monument Bar*.—Square wooden crib filled with stone, mast and cage at top.
- No. 39. *Ram's Horn*.—Square wooden crib filled with stone, wooden shaft at top.
- No. 40. *Lobster Rocks*, Beverly Harbor.—Stone, with wooden spindle.
- No. 41. *Black Rock*, Gloucester Harbor.—Iron spindle with oblong cage at top.
- No. 42. *Harbor Rock*, Gloucester Harbor.—Iron spindle, with ball cage at top.
- No. 43. *Five-Pound Island*, Gloucester Harbor.—Granite base, with iron spindle and ball at top.
- No. 44. *Lobster Rock*, Annisquam.—Square open-work granite beacon.
- No. 45. *Lane's Point*.—Square wooden beacon.
- No. 46. *Point Neck Rock*.—Iron spindle, with ball at top.
- Black Rocks* on starboard hand entering Merrimack River, Newburyport Harbor, rocks out at half tide.—Iron spindle twenty-three feet high, with cask at top. Erected this season.
- No. 47. *North Pier*.—Newburyport harbor.—Wooden crib filled with stone.
- No. 48. *South Pier*, Newburyport harbor.—Wooden crib filled with stone.

## LIGHT-VESSELS.

- No. 87. *Shovelful Light-vessel* No. 3.—Good order. This vessel has been taken into Hyannis, her metal repaired, &c.
- No. 88. *Handkerchief Light-vessel* No. 4.—Good order. This vessel has been taken into Hyannis to have her metal and stern repaired, &c.
- No. 100. *Cross Rip Light-vessel* No. 5.—This vessel has been taken to New Bedford placed on the marine railway, her metal repaired, partially recalced, her boats repaired, &c.
- No. 102. *Succonnessett Light-vessel* No. 6.—This vessel is in very bad condition, and another vessel (No. 24) has been sent to the district to supply her place, but she will require some repairs before being put on the station.
- No. 107. *Vineyard Sound Light-vessel* No. 7.—This vessel was taken to New Bedford last November, her upper works newly calked, decks leathed, supplied with new foresail, new windlass, new running rigging, fifteen fathoms new chain cable, and put in thorough order.
- No. 108. *Hen and Chickens Light-vessel* No. 8.—This vessel has been taken to New Bedford, placed upon the marine railway, her bottom partially refastened, recalced, remetaled, a new set of plain sails supplied, and the vessel put in thorough order generally.

## RELIEF LIGHT-VESSELS.

- Relief Light-vessel* No. 9.—This vessel has been entirely retopped the last year, supplied with a new suit of plain sails, her water-tanks retopped, furnished with new day-marks, and such new rigging as

required, and is now a most excellent vessel, suitable for occupying any station in the district.

*Relief Light-vessel* No. 38.—The upper works of this vessel have been recalced and painted, and the vessel is now in excellent condition, and in readiness to go to any station in the district at a moment's notice. Has been recently sent for temporary service to the Sixth District.

#### BUOYS.

*Buoys actually in position.*—All the buoys in the district (five hundred in number) have been shifted since the opening of the spring, and are now in excellent order.

#### TENDERS.

The steam tender *Verbena* is an efficient vessel, and in good condition, but one tender is insufficient for a district having so many buoys, Light-vessels and Light-houses to visit and look after.

#### LIGHT-VESSEL AND BUOY-DEPOTS.

The *Buoy Depot at Gulf Island*, the place of residence of the Minot's Ledge Light-keepers, is difficult of access, as it can only be reached at high water, and it is proposed to have the buoys kept higher up in Boston Bay if a proper place can be obtained.

At the *Light-vessel and Buoy-depot* at Wood's Hole some repairs of the wharf required will soon be made under the direction of the Engineer of the district.

#### TENDER.

The tender authorized by the last session of Congress, designed for the use of the Engineer of the First and Second Districts, is being built under contract.

#### THIRD DISTRICT.

The Third District embraces all aids to navigation from Gooseberry Point, Massachusetts, to include Squam Inlet, New Jersey, as well as the Hudson River, Whitehall Narrows, and Lake Champlain.

*Inspector.*—Commodore James H. Strong, United States Navy.

*Engineer.*—Brevet Brigadier General I. C. Woodruff, Lieutenant Colonel of Engineers, United States Army.

In this district there are—

Light-house and lighted beacons.....	107
Day or unlighted beacons.....	48
Light-vessels.....	9
Buoys actually in position.....	432
Spare buoys for relief and to supply losses.....	458
Tenders (steam) <i>Cactus</i> and <i>Putnam</i> .....	2

The numbers preceding the names of stations correspond with the "Light-house Lists of the Atlantic, Gulf, and Pacific Coasts, and the Northern and Northwestern Lakes of the United States," issued January 1, 1871.

#### LIGHT-HOUSES AND LIGHTED BEACONS.

*Castle Hill*, east side of entrance to Newport Harbor, Narragansett Bay, Rhode Island.—The application of former years for a Fog-signal on *Castle Hill* is not renewed, in view of the proposed erection of a

steam syren signal at *Beaver Tail* Light-station, distant only about two miles.

118. *Beaver Tail*, Rhode Island.—A steam syren will be erected at this station during this season, and it is believed that there will be no necessity for the Fog-signal at *Castle Hill* on the opposite side of entrance to Newport Harbor, which has frequently been petitioned for.

119. *Lime Rock*, Rhode Island.—The rock on which this Light-house stands is full of crevices, through which the water, during heavy rains, enters the cellar. It is proposed either to cover the rock with concrete made of Portland cement, gravel, and sand, or to endeavor to remedy it by drains. The latter has been directed to be done, (experimentally,) being less expensive.

120. *Newport Harbor*, (Goat Island,) Rhode Island.—It is recommended that a Fog-bell, operated by Stevens's striking apparatus, may be placed at this station, as an essential aid in entering the harbor. Estimated cost, \$800.

123. *Poplar Point*, Narragansett Bay, Rhode Island.—The repairs and renovations which were authorized for this station have been completed, and a new lantern substituted for one of the oldest construction.

*Muscle Bed Beacon*, Narragansett Bay, Rhode Island.—The construction of a Light-house on *Hog Island Reef* has been petitioned for for several years, but hitherto Congress has not granted an appropriation therefor. The erection of a portable Light and a Fog-bell on the existing stone tower on the *Muscle Bed*, one-half mile distant, on the opposite side of the channel, at a cost of \$3,000, will, it is believed, obviate the necessity for this Light-house, which would be a very expensive construction.

127. *Conimicut Point*, Rhode Island, entrance to Providence River, Narragansett Bay.—When the Light on the shoal off *Conimicut Point* was lighted as a substitute for the Light on the main land, at *Nayat Point*, (distant about one mile,) the only available means of attending upon it were to allow the keepers to retain the dwelling at the old Light-station, and for them to visit the new Light by boat. The land constituting the site of the old Light-station at *Nayat Point* is valuable, and would bring at public sale a good price. The old tower is not worth the cost of tearing it down, and the dwelling not having been repaired, in expectation of an appropriation for completing the buildings at *Conimicut Point*, to include a proper dwelling for the keeper, it now becomes necessary either to make considerable expenditure upon the *Nayat Point* dwelling, or ask for a special appropriation for the necessary protection pier against running ice, and for a dwelling at that Light-house. The estimated cost of the work is \$30,000.

*Sabine's Point*, Providence River, Rhode Island.—By an act of Congress, approved March 3, 1871, an appropriation was made for the erection of a Light-house on this point. Plans and specifications have been prepared, and proposals for the construction of the work are invited by public advertisements, to be received until July 31, 1871.

128. *Pumham Rock*.

129. *Fuller's Rock*.

*Sassafras Point*.

The construction of these three permanent Lights in Providence River, above *Sabine's Point*, Rhode Island, authorized by an appropriation made July 15, 1870, is progressing under contracts, and will be completed this season.

130. *Point Judith*, Rhode Island.—The present Fog-signal, operated by a caloric engine, has been found insufficient for this important sta-

tion on the water-route from New York to New England. Frequently the sound of the signal is lost in the noise of the surf, so that steamers and vessels are left without a reliable guide off this dangerous point. It is recommended to replace the present signal by a first-class steam Fog-signal *whistle*, and a duplicate at a cost of \$5,000, including the housing. To distinguish it from the *Beaver Tail Syren*, a whistle should be placed at *Point Judith*.

131. *Block Island*.—To arrest the drifting sands which created some apprehension for the safety of the buildings, a wattling of small stakes, driven into the sand and interlaced with brush, was recommended in a special report to the Light-House Board, and by it approved. It is believed that willow-slips, in addition to the above wattling, will be efficient in arresting the drifts. For this object an estimate of \$1,800 is presented.

132. *Watch Hill*, Connecticut.—The repairs and renovations provided for in the appropriation of July 15, 1870, were completed during this season, with the exception of placing the lantern-deck and parapet, which is now ready for shipping to the station.

133. *Montauk Point*, Long Island, New York.—The keeper's dwelling requires a new roof, and ceilings in the attic require replastering. This, with other incidental repairs of the tower, &c., will cost \$1,500. It is recommended that a Fog-signal be placed at this important station, for which, with a duplicate, \$8,000 is estimated.

137. *North Dumpling*, Fisher's Island Sound.—The repairs and renovations provided for in the appropriation of July 15, 1870, are completed. The roof on the keeper's dwelling was replaced by a Mansard roof, and a new tower, with lantern, erected upon the dwelling. The bell-tower was thoroughly repaired, the roof over the striking apparatus tinned, and the whole repainted. A barn was built, and the banks of the sluice leading into the pond, which is used as a basin for the keeper's boat, have been protected by rough granite blocks.

140. *Race Rock*, Fisher's Island Sound, New York.—The construction of the foundation for a new Light-house on *Race Rock*, commenced in April last, is progressing satisfactorily, about 3,000 tons of granite having been placed in riprap foundation, in addition to which 7,000 tons will be delivered under a contract now in operation. The entire foundation, together with a portion of the supporting pier and landing wharf, will be put under contract and completed by the close of this fiscal year. The original estimate of the cost for this structure is \$200,000. The amounts provided by special acts of Congress are as follows, viz:

By act approved July 15, 1870.....	\$10, 000
By act approved March 3, 1871.....	150, 000
Total.....	<u>160, 000</u>

The amount of \$40,000 is embraced in the estimates for continuing this work.

141. *Little Gull Island*, Long Island Sound.—A horizontal steam-boiler to operate a syren Fog-signal has been placed at this important point, and is found to be very efficient in guiding vessels through "the Race" in foggy weather. A duplicate signal, for which an appropriation was made March 3, 1871, is in process of construction, and will be put up as soon as completed. The bell, which had been retained for cases of emergency, will then be removed. A suitable building for the reception

of the duplicate signal is just being completed. Cisterns have been built, and the entire pier, on which the tower and dwelling stand, was covered with concrete flagging for the purpose of collecting all the rainfall which is required for the steam Fog-signals. To complete the landing the sum of \$5,000 is estimated.

142. *Gardiner's Island*, Long Island Sound.—The necessary alterations in the lantern, and the painting of the tower and keeper's dwelling, inside and out, are completed.

143. *Plum Island*, Long Island Sound.—The rebuilding of this station is completed, and a Fog-bell, operated by a Stevens's striking apparatus, placed at this station.

*Oyster Pond Point*, Plum Gut, Long Island Sound.—An estimate is again submitted for the erection of a stone beacon on *Oyster Pond Point Reef*, to guide vessels to and from Long Island Sound to Gardiner's Bay, New York.

144. *Long Beach Bar*, Long Island Sound.—The erection of a lighted beacon at this station was provided for by special appropriation of July 15, 1870, the plan adopted being a light on the keeper's dwelling, which is founded on screw-piles. These are protected by an ice-breaker of granite blocks placed in riprap. The entire iron and wood-work for this structure is completed, and contracts are now in operation for the erection of the Light-house, and building the ice-breaker. It is expected that the Light can be exhibited at this station by the close of this season.

145. *Lockaway's Reach*, Connecticut River.—A portion of the stones which protect the foundation of this beacon having been washed away by the spring freshets, has been replaced.

146. *Bea's Wharf*, Connecticut River.—The stones, which were washed away by freshets, have been replaced.

147. *Horton's Point*, Long Island.—The repairs and renovations provided for by the appropriation of July 15, 1870, are completed. The rooms for the accommodation of the assistant keeper were added to the keeper's dwelling, and a room provided for the Light-house supplies; the keeper's dwelling was thoroughly repaired and repainted. A cast-iron lantern deck was substituted for the stone one, which leaked. The second order lens, which originally formed a part of a revolving apparatus, has been replaced by a third order fixed lens; the focal plane was raised and the illuminating apparatus rendered more efficient. The entire outside brick-work of the tower and dwelling, which was found in a state of rapid decay, caused by the action of the atmosphere and frost, was covered with a coating of Portland cement mortar. The barn was thoroughly repaired, and the fences to a great extent renewed and repaired.

148. *Fuller's Island*, Long Island Sound.—The repairs and renovations, including rebuilding of keeper's dwelling, and substituting an iron stairway for a wooden one—authorized by the appropriation of July 15, 1870, are progressing, and will be completed during this season. A powerful steam Fog signal is recommended for this station to prevent the frequent losses of vessels which occur in its vicinity during fogs and snow storms. For this object an appropriation of \$8,000 is asked. The bank to the eastward is slowly wearing away, the loss having been about twelve feet in the course of twenty years. It may be necessary at a day not far distant to protect the foot of the slope, near the Light-house, by riprap along a distance of about two hundred feet or more.

149. *New Haven Harbor*.—The repairs and renovations provided for by the appropriation of July 15, 1870, are completed. The caloric

engine which operated the Fog-bell being worn out, was replaced by a Stevens's striking apparatus.

155. *Stratford Point*, Long Island.—The condition of this station is very bad. The rebuilding of the tower and keeper's dwelling has been recommended for the last three years. It is now recommended that a frame building be erected, on which the lantern-tower will be placed. For this and the necessary out-buildings, an estimate of \$15,000 is respectfully submitted.

157. *Bridgeport Harbor*, Connecticut.—The rebuilding of this beacon was authorized by the appropriation of July 15, 1870. The plan adopted is similar to that for *Long Beach Bar*, viz, a Light on keeper's dwelling, which is founded on screw-piles; these being protected by an ice-breaker of granite blocks placed in riprap. The entire iron and wood-work for this structure is completed, and contracts are now in operation for the erection of the Light-house, and building the ice-breaker. The Light will probably be exhibited by October next.

158. *Black Rock*, Connecticut.—The buoy-wharf and shed for storage of buoys at this station, authorized by the appropriation of \$8,000, on March 3, 1871, will be built during this season, the plans being in readiness to invite proposals for its construction.

160. *Penfield Reef*, Long Island Sound.—The construction of a Light-house on *Penfield Reef*, near Bridgeport, Connecticut, authorized by appropriations made July 15, 1870, and March 3, 1871, has been commenced under contracts now in operation, and will be prosecuted with a view to its completion during the next working season.

161. *Eaton's Neck*, Long Island.—A powerful steam Fog-signal, authorized under appropriation made July 20, 1868, has been put up at this station. It is a syren, and a building for a duplicate now in process of construction, and a building for the caloric engine for pumping water for the use of the Fog-signal, have been erected.

162. *Lloyd's Harbor*, Long Island.—The damage caused to the Light-house at this station by the gale of November 22, 1870, has been repaired and a granite wall built to protect the station, at a cost of about \$3,000.

*Stamford Harbor*, Connecticut.—An examination of the "Ledge" in this harbor was made under instructions from the Light-House Board, by the Inspector and Engineer of the district, in accordance with petition of a large number of persons interested in the trade of this port for a Light to mark the "Ledge." The report of the Inspector and Engineer recommends a day-beacon on the "Ledge" and a lighted beacon on the opposite side of the channel. The cost of the two structures will be \$8,000, which amount is included in the estimates.

165. *Execution Rocks*, Long Island Sound.—The work of protecting this station against the ice and sea, authorized by the appropriation made July 15, 1870, has been completed. The damage caused by the ice during the winter has also been repaired, and the keeper's dwelling is now being repainted. The tower needs extensive repairs, pointing on the exterior, and alterations in the interior.

166. *Sand's Point*, Long Island.—The damage caused by gales during the winter to the jetties and sea-wall which protect this station has been repaired at a cost of about \$3,000. The buildings require repairs, and for this purpose an estimate is submitted of \$3,000.

*Hart Island*, Long Island Sound.—An appropriation was made in 1866 for the erection of a Light at this point. The owner of the island being unwilling to sell the requisite quantity of land for this Light-station for such a sum as the Board would have been authorized to

give, proceedings were instituted, in conformity to law, for condemning the land. The award of the appraisers for five acres of land was \$25,000, a sum far exceeding the entire appropriation, and, in the opinion of the board, far beyond its intrinsic money value. Having made further examinations, it is found that the south end of the island, upon which the Light would necessarily be placed, if placed on the island at all, is continually washing away, and unless it is protected by an expensive sea-wall, a Light-house could not remain there very long. The end of the reef, (in six feet water,) which runs out from the southern end of the island, would afford a good foundation and proper site for the erection of a stone structure similar to those already erected at points on the Hudson River. The estimated cost of the proposed structure and apparatus, complete in all respects, is \$50,000, and is included in the annual estimates this year.

169. *Great West Bay, Long Island.*—The tower requires repointing and coating with Portland cement; the dwelling also requires repairing and painting; speaking-tubes and an alarm-bell are needed to communicate from the watch-room in the tower with the keeper's dwelling. An estimate of \$500 is submitted herewith.

170. *Fire Island, Long Island.*—The outside painting on the tower is very defective, and does not appear in the color represented in the Light-house list. Many bricks are crumbled, and require to be replaced by sound ones, and the tower covered with Portland cement-wash. Speaking-tubes and an alarm-bell are also needed to communicate from the watch-room with the keeper's dwelling. An estimate of \$500 is submitted herewith.

175. *East Beacon, Sandy Hook.*—A new first-class steam (siren) Fog-signal, with horizontal boiler, has been substituted for the old one with vertical boiler, the tubes of which were destroyed by corrosion. A duplicate steam Fog-signal, authorized by the appropriation of March 3, 1871, is in course of construction, and will be put up as soon as completed.

A new frame building has been erected for the new Fog-signal. The old building has been moved to the vicinity of the new one, and has been renovated to receive the duplicate signal.

A well has been dug and walled, which furnishes fresh water for the boilers of the signal. The keeper's dwelling requires repainting inside and outside, which will be done at an early period.

In the previous annual report reference was made to the abrasion of the beach, which rendered it necessary to remove the beacon building five hundred feet to the southward. The abrasion does not seem to be of a threatening character at this time, but no doubt is entertained that upon the completion of the jetties, recently commenced by the Engineer Department for the protection of the beach in front of the fort from abrasion, the accumulation of sand will be arrested, and abrasion will most likely result in the vicinity of the beacon and the new Fog-signal structures. It is hence deemed imperative to guard against such a contingency by the construction of two jetties similar to those adopted by the Engineer Department. The cost of such protection is estimated at \$25,000.

It may be well to state that a further removal of the beacon and the Fog signal to the southward is impossible, as they would, if so removed, be masked by the works of defense seaward or in the direction the sound from the signal is especially needed.

*Flynn's Knoll, Lower Bay of New York.*—The erection of a Light-house on *Flynn's Knoll*, in nine feet water, to form a range with *Princeton Bay Light*, for the deepest water in *Gedney's Channel*, was recom-

mended in last year's report and in those of former years. The great importance of a reliable guide to navigation on this dangerous shoal seems to justify the attempt to bring the subject again to the attention of Congress. The amount of \$100,000 for commencing the work is embraced in the estimates.

177. *Conover Beacon*, Sandy Hook Bay.—Repairs at this station are much needed and will be made as soon as the more urgent necessities of the district admit.

178. *Chapel Hill Beacon*, New Jersey.—The out-buildings at this station, blown down during a gale, have been rebuilt, and the fences have been repaired.

181. *Elm Tree Beacon*, Staten Island.—The extension of the jetty, for which funds have been provided by the appropriation of March 3, 1871, will be built during this season.

183. *Princess Bay*, Staten Island.—The protecting wall authorized by the appropriation of July 15, 1870, is in course of construction under contract, and, it is expected, will be completed during the present season. The wood-work of the keeper's dwelling and the iron-work of the tower have been repainted.

184. *Fort Tompkins*, Staten Island.—The Light-house at this station must be removed shortly to the interior of the works of defense. Its present site is required for the purposes of a battery now in course of construction. Experimental firings are of frequent occurrence at this fort, during which the glass of the lantern is broken. As a temporary expedient a wooden frame has been made, and a light will be exhibited therefrom near to the present Light-house, at a point designated by the Engineer officer in charge of the fort. For a dwelling surmounted by a tower, at the new site of the Light-house, the sum of \$8,000 is asked.

192. *Esopus Meadow*, Hudson River.—The rebuilding of this station under the appropriation of July 15, 1870, is in progress under contract, and will be completed during the present fiscal year.

194. *Saugerties*, Hudson River.—The Engineer of the district was authorized to draw up a contract for signature of the persons desiring to occupy the old Light-house pier at this station for a public wharf, in such a manner as to secure the interests of the United States. He sent the contract so prepared, but up to this time the contract has not been returned to him. One of the conditions was to remove the old dwelling-house, also requested by the petitioners for use as a store-house, to such a distance as not to endanger the new structure by fire. In case the parties do not comply with the terms of the contract the old buildings will be taken down, being of no further use to the station.

197. *Stuyvesant Light-house*, Hudson River.—The old dwelling at this station will be retained as a depot for keeping portable beacons of Hudson River during the close of navigation.

198. *New Baltimore.*

199. *Five Hook Island.*

200. *Coeysman's Bar.*

201. *Roha Hook.*

202. *Schodack Channel.*

203. *Nine-mile Tree.*

204. *Cow Island.*

205. *Parada Hook.*

206. *Van Weiss Point.*

207. *Ouyler's Dyke.*

These ten beacon-lights in the Hudson River, which were destroyed



by ice and freshets, will be restored during this season, under the appropriation of March 3, 1871, for this purpose.

*White Hall Narrows*, 416, 417, and 420-431 inclusive.—The portable beacons in *White Hall Narrows* are in good order. The customary removal for the winter was unnecessary, during the last winter the ice in the Narrows having melted to such a degree before it moved that no damage to the beacons was anticipated. Two stake-lights require to be replaced by portable beacons, viz:

418. *Opposite Chapman's Dock*; and

419. *South of Snoddy's Dock*.

Estimated cost \$800 each.

432. *Crown Point*, Lake Champlain.—The keeper's dwelling needs repairs and repainting. A stable is much needed at this station, and has been recommended in previous reports. The recommendation is renewed. Estimated cost for repairs and for stable, \$1,500.

433. *Barber's Point*, Lake Champlain.—A contract has been made for the construction of a Light-house on this point, as provided by the appropriation of July 15, 1870. The work will be commenced as soon as a certain judgment debt is removed and a valid title to the United States can be secured.

434. *Split Rock*, Lake Champlain.—Boatways and capstan authorized by the appropriation of March 3, 1871, will be supplied during this season.

435. *Juniper Island*, Lake Champlain.—The construction of a wharf and boat-house, under the appropriation of March 3, 1871, will be carried into effect during the present season.

436, 437. *Burlington Breakwater*, Lake Champlain.—Funds have been provided, under the appropriation of March 3, 1871, for the construction of a Light on keeper's dwelling upon the north end of the breakwater. The work will be commenced as soon as the extension of the breakwater is completed.

438. *Colchester Reef*, Lake Champlain.—By an act of Congress approved July 15, 1870, the amount of \$20,000 was provided for building a Light-house at *Colchester Point*, or in its vicinity, Lake Champlain. It was reported last year as follows: "After a careful examination and survey of the locality, it was found that the rock called 'Middle Bunch' was the proper place for the new Light-house. This rock is in the middle of the channel, with seven feet water over it at low water, and deep water on either side. With a Light thereon a vessel can pass on either side close to the rock. The work has been commenced and will be carried above water (and further, if possible) this fall, and will be completed next season."

The crib for the foundation was made in Burlington, and was towed to, placed on the reef, and filled in with concrete and rough stone. Two courses of the cut stone were also laid, and thereby the pier was brought above water. Before the work was abandoned for the season, it was ballasted with heavy blocks of stone to prevent its being moved by the ice. When the ice moved in the spring the ballast on the pier, with a part of the second course of cut stone, were shoved into the lake; the first course was found undisturbed. A few of the cut stone were found and replaced; but four hundred and eighty-one feet had to be rebuilt. After the damage had been repaired, the work on the pier was resumed and completed by the end of June.

The appropriation of \$20,000 was made for a Light-house on *Colchester Point*, or its vicinity, which amount would have been ample for a structure on land. The necessary change in the locality for the Light

from *Colchester Point* to a reef in seven feet water, required also a change in the plans of the structure. The new plans were prepared with the intention to keep the expenses within the amount of the appropriation. This, however, was frustrated by the various causes enumerated. The amount required for the completion of the Light-house on the *Middle Bunch*, (*Colchester Reef*), Lake Champlain, in addition to the former appropriation, is \$4,500. A Fog-bell will be erected at this station.

439. *Bluff Point*, Valcour Island, Lake Champlain.—The appropriation of July 15, 1870, provides for the construction of a Light-house on this point. A contract for its construction has been entered into, and work will be commenced as soon as a valid title to land is secured to the United States.

442. *Cumberland Head*, Lake Champlain.—The appropriation of March 3, 1871, provides the means for the purchase of additional land at this station for the object of removing certain trees which now obstruct the Light. The purchase will be made and the obstructions removed during this season.

444. *Isle La Motte*, Lake Champlain.—It has been recommended in previous reports to replace the present beacon-light by a Light on keeper's dwelling, and is renewed. The distance between the residence of the keeper and the beacon is too great to secure proper attendance. The estimated cost of the dwelling, surmounted by a tower, is \$8,000.

At each of the following Light-stations there have been repairs and renovations more or less extensive during the year, and not alluded to in this report:

- 126. *Warwick Neck*, Narragansett Bay.
- 136. *Morgan's Point*, (Mystic,) Fishers' Island Sound.
- 138. *New London Harbor*, Connecticut.
- 145. *Cedar Island*, Gardiner's Bay.
- 154. *New Haven Long Wharf*, Long Island Sound.
- 167. *Throgg's Neck*, Long Island Sound.
- 174. *Sandy Hook*, entrance to New York Bay.
- 189. *Elbow Beacon*, Newark Bay.
- 440, 441. *Plattsburgh Beacons*, Lake Champlain.
- 443. *Point au Roche*, Lake Champlain
- 445. *Windmill Point*, Lake Champlain.

The following-named stations have not been mentioned elsewhere:

- 121. *Rose Island*, Narragansett Bay, Rhode Island.
- 122. *Dutch Island*, Narragansett Bay, Rhode Island.
- 124. *Prudence Island*, Narragansett Bay, Rhode Island.
- 125. *Bristol Ferry*, entrance to Mount Hope Bay, Rhode Island.
- 134. *Stonington Harbor*, Connecticut.
- 146. *Saybrook*, mouth of Connecticut River.
- 147. *Calves' Island*, Connecticut River.
- 159. *Old Field Point*, Long Island Sound.
- 163. *Norwalk Island*, Long Island Sound.
- 164. *Great Captain's Island*, Long Island Sound.
- 168. *North Brother Island*, East River, New York.
- 172, 173. *Highlands of Navesink*, New Jersey, New York Bay.
- 176. *West Beacon*, Sandy Hook, New York Bay.
- 179. *Point Comfort Beacon*, entrance to New York Bay.
- 180. *Waackaack Beacon*, entrance to New York Bay.
- 182. *New Dorp Beacon*, Staten Island, New York Bay.
- 185. *Robbin's Reef*, New York Harbor.
- 186. *Bergen Point*, Newark Bay, New Jersey.

- 187. *Corner Stake*, opposite Elizabethport, New Jersey.
- 188. *Passaic Light*, near mouth of Passaic River, New Jersey.
- 190. *Stony Point*, Hudson River.
- 191. *West Point*, Hudson River.
- 193. *Rondout*, Hudson River.
- 195. *Four-mile Point*, Hudson River.
- 196. *Carsackie*, Hudson River.

## UNLIGHTED BEACONS, INCLUDING SPINDLES.

All the beacons and spindles in the following list are in good condition, unless otherwise stated.

- 1. *East Lime Rock*, near Newport.—A granite structure, surmounted by an iron spindle and cage.
- 2. *South Point*, Rose Island, Narragansett Bay.—Granite structure, surmounted by a spindle and cage.
- 3. *Halfway Rock*, three-fourths of a mile southward of Prudence Island Point, Narragansett Bay.—Spindle, with square cage.
- 4. *Bullock's Point*, Narragansett Bay.—Stone beacon, with iron spindle and day-mark.
- 5. *Pacturet Beacon*, Narragansett Bay.—Of stone.
- 6. *Pumham Beacon*, Providence River.—A stone beacon, with vane and ball.
- 7. *Muscle Bed*, east side of the channel below Bristol Ferry, Rhode Island.—A stone beacon, with iron spindle and day-mark.
- 8. *Borden's Flats*, opposite to Fall River.—A stone beacon, with iron column and day-mark.
- 9. *Castle Island*, near north end of Hog Island, Bristol Harbor.—A stone beacon, surmounted by a red ball. The foundation requires repairing and protection.
- 10. *Allen's Rock*, Warren River.—Stone beacon, one-eighth mile north of Adam's Point.
- 11. *Warwick, or Spindle Rock*, west channel of Narragansett Bay, and entrance to Greenwich Harbor, between Warwick Neck and Pojack Point.—Iron spindle, with square wooden cage.
- 12. *White Rock Beacon*, at the entrance of Wickford Harbor, Narragansett Bay.—Stone beacon, with iron column and day-mark.
- 13. *Watch Hill Spindle*, entrance to Fisher's Island Sound from Light-house, southwest by south three-fourths of a mile.—Stands on a rock, which is bare at low water, and is surmounted by a cage.
- 14. *Sugar Reef Beacon*, Fisher's Island Sound.—Iron-pile beacon with cage-work day-mark in the form of a cone.
- 15. *East or Catumb Reef Spindle*, entrance to Fisher's Island Sound by Lord's Channel, one and one-fourth miles east of east point of Fisher's Island.—An iron-pile beacon, with square cage-work.
- 16. *West or Wicopasset Spindle Rock*, entrance to Fisher's Island Sound by Lord's Channel.—Northwest of East Spindle two-thirds of a mile.
- 17. *Latimer's Reef*, Fisher's Island Sound, one mile northwest of east point of Fisher's Island, and three-fourths of a mile southeast of Eel Grass Shoal Light-vessel.—An iron spindle, bearing a square cage-work.
- 18. *Ellis's Reef*, Fisher's Island Sound, three-fourths of a mile northwest of Eel Grass Shoal Light-vessel.—An iron spindle, with a square cage-work.
- 19. *Ram Island Reef*, Fisher's Island Sound. One-half of a mile southeast of Ram Island.

20. *Spindle on the Whale*, entrance to the Mystic River.—As reported last year, this spindle was carried away by ice. It is proposed to build a beacon of stone, bearing a day-mark, at the estimated cost of \$5,000.

21. *Crook's Spindle*, Mystic River.—Is an iron spindle, with a keg on top.

22. *Groton Long Point*, Fisher's Island Sound.—An iron spindle, bearing a cage-work in the form of an inverted cone.

23. *Sea-flower, or Potter's Reef Beacon*, Fisher's Island Sound, northwest of *North Dumpling Light* one mile.—Remains as reported last year. It is a very important mark in Fisher's Island Sound, and recommended for immediate reconstruction. It is proposed to build a granite structure for the purpose of upholding the spindle and cage of the old beacon. Estimated cost, \$4,200.

24. *Black Ledge*, entrance to New London Harbor.—An iron shaft, bearing a cage-work day-mark, formed by two cones connected at the vertices.

25. *Saybrook Beacon*, Connecticut River.—Stone beacon, with globe on Saybrook Bar.

26. *Hen and Chickens*, Long Island Sound.—Iron spindle bearing a square cage, painted black.

27. *Branford Reef Beacon*, Long Island Sound.—Granite beacon, surmounted by an iron shaft, bearing a black day-mark.

28. *Quice's Ledge*, entrance to New Haven Harbor, Connecticut.—An iron spindle, with a cask on top; stands on a rock which is dry at half tide.

29. *Southwest Ledge Spindle*, entrance to New Haven Harbor, Connecticut.—Marked by a second-class buoy.

30. *Stratford River Beacon*, entrance to Stratford River.—Granite beacon, with iron column and day-mark.

31. *Inner Beacon*, Bridgeport Harbor, Connecticut.—A frustum of a square pyramid of wood, surmounted by a wooden mast, with a cask, painted black.

32. *Outer Beacon*, Bridgeport Harbor, Connecticut.—The same as the inner beacon.

33. *Black Rock Beacon*, Long Island Sound.—An iron-pile beacon, with a cage on top.

34. *Southport Beacon*.—Granite beacon, with iron column and day-mark.

35. *Southport Breakwater Beacon*.—Granite beacon, with iron column and day-mark.

36. *Norwalk Beacon*, southwest of Norwalk Island, Connecticut.—A granite structure, supporting a shaft and day-mark of iron.

37. *Great Reef*, off Norwalk Island, entrance to Norwalk Harbor.—A wooden spindle, with cage day-mark, is in course of construction.

38. *Sand Spit*, on the south point of Sand Spit, Sag Harbor.—This beacon, having been destroyed by ice, is being replaced by a stone beacon, surmounted by a wooden tower.

39. *Oyster Pond Point*, Plum Gut, entrance to Gardiner's Bay.—As reported last year. A reef runs out into Plum Gut, which is bare at low water. It is proposed to erect a stone beacon upon it to guide vessels running into Gardiner's Bay clear of this danger. Estimated cost, \$5,000.

40. *Success Rock*, Long Island Sound.—An iron shaft, with conical cage-work.

41. *Romer Beacon*, on the west side of Romer Shoal, entrance to the Bay of New York.—A granite structure in the form of a frustum of a cone, surmounted by a wooden mast and square cage day-mark. The

repairs authorized by the appropriation of March 3, 1871, will be made during this season.

42. *Mill Reef Beacon*, Kill Van Kull, opposite New Brighton.—This is a sheet-iron beacon, filled in with concrete, and secured to a granite base. It is conical in shape, and supports an iron shaft with an iron cage on top.

#### STATEN ISLAND LIGHT-HOUSE DEPOT.

*Building for offices*.—The work on this building, having been suspended more than one year for want of funds, has been resumed, and the structure will be completed and ready for occupation by November.

*Shed and Wharf*.—The work authorized by the appropriation of July 15, 1870, has been completed. The basin in front of the depot has been dredged to a depth of ten feet at low-water, and is now a safe harbor for the vessels connected with the Light-house service. Adjacent to the basin a coal bin of 800 tons capacity has been built. The depot being situated at the foot of a slope, which is full of springs, requires a system of drainage and grading. The estimated cost for this work, in addition to the expenses of keeping the depot and buildings in order, is \$20,000.

#### LEGISLATION CEDING JURISDICTION OVER LIGHT-HOUSE SITES.

A circular letter from the Light-House Board of July 11, 1870, called for the names of such States in this district as had not passed, first, a general law ceding jurisdiction over land purchased by the United States from time to time for public uses; and, second, a general law providing for the acquirement of land by the United States in cases of disagreement with the owners. Letters were addressed to the secretaries of state of New Jersey, Vermont, Connecticut, Rhode Island, and New York, inquiring if these laws had been passed, and it was subsequently learned that none of these States had passed such general laws, the custom being uniform to pass special acts for each case, where land was required. Subsequently letters were addressed to the governors of Rhode Island, Connecticut, New Jersey, and New York asking the passage of these general laws, and the Engineer of the district personally urged their passage at the capitals of the States named. Rhode Island passed the general law, and in addition a special act, ceding the State's right over certain points in the navigable waters of the State. New York adhered to its former custom, and only passed a special act to cover certain sites named in the acts, and limiting the quantity of land. It is not known if the other States in the districts have passed any acts. The passage of these acts by the States of New York and Rhode Island was delayed until late in the session of their legislatures, and the works appropriated for in the act of Congress of July 15, 1870, dependent upon the passage of these laws ceding jurisdiction, were consequently delayed until very near the close of the last fiscal year.

*Number of boxes, packages, and barrels received at and shipped from Light-house depot, Staten Island, from October 1, 1870, to June 30, 1871.*

	Boxes.	Packages, cans, &c.	Barrels.	Total.	Same period of time last year.	Increase.
Received .....	1,840	3,775	2,809	8,424	4,996	3,428
Shipped .....	1,389	3,338	2,293	7,020	5,935	1,085
Total .....	3,229	7,113	5,102	15,444	10,931	4,513

*Lens apparatus received at and shipped from Light-house depot, Staten Island, from October 1, 1870, to June 30, 1871.*

	1st order.	2d order.	3d order.	3d order.	4th order.	5th order.	6th order.	Steamer lenses.	Pressed lenses.	Canal lenses.	Totals.
Received .....	1		3		6	1	1	15	4		25
Shipped .....			2	1	6	5		9		4	21
Total .....	1		5	1	12	6	1	24	4	4	56

*Articles manufactured and repaired in lamp-shop at Light-house depot, Staten Island, from October 1, 1870, to June 30, 1871.*

	Lenses.	Lamps.	Lamp burners.	Miscellaneous articles.	Total.
Manufactured .....	11	70	216	485	782
Repaired .....	5	61	90	38	194
Total .....	16	131	306	523	974

#### FOURTH DISTRICT.

The Fourth Light-house District extends from Squam Inlet, New Jersey, to and including Metomkin Inlet, Virginia. It also includes Delaware Bay, River, and tributaries.

*Inspector.*—Commodore William H. Macomb, United States Navy.

*Engineer.*—Brevet Brigadier General I. O. Woodruff, Lieutenant Colonel of Engineers, United States Army.

In this district there are—

Light-houses and lighted beacons .....	15
Light-vessels .....	3
Buoys actually in position .....	164
Spare buoys for relief and to supply losses .....	23
Tender (steam) <i>Violet</i> .....	1

The numbers preceding the names of stations correspond with those of the "Light-house List of the Atlantic, Gulf, and Pacific Coast of the United States," issued January 1, 1871.

208. *Barnegat, New Jersey.*—The semi-monthly measurements along the beach near the Light-house have been continued throughout the year. During the winter a portion of the works of protection was damaged to some extent, though not seriously, part of the riprapping having slid into deep water, allowing the sea to pass over and wash out the sand. Three stone jetties, for the protection of the former works, have been built, requiring 993 tons of stone, which will, it is believed, prove satisfactory. The fence around the building has been rebuilt.

210. *Absecon, New Jersey.*—The semi-monthly measurements along the beach in the vicinity of the Light-house have been made throughout the year. Favorable changes have taken place, and no apprehension for the safety of the station need be entertained. A store-house is now being built, and repairs to the keeper's dwelling made, which will be completed during the next month. The authorities of Atlantic City have not yet furnished the grant from the property owners, for the occupation of the land required for sites for the works of protection heretofore appropriated for by Congress, and the money still remains in the Treasury.

*Hireford Inlet, on the coast of New Jersey, ten and three-fourths nautical miles north of Cape May Light-house.*—A small light, say a fourth tier, is respectfully recommended for this place, as it would be of importance to the coal trade, and to steamers navigating Delaware Bay and River, and to mark the entrance to the inlet, where there is a good harbor of refuge for small coasting vessels. Estimated cost \$25,000.

*Cross Ledge Light Station, Delaware Bay.*—An estimate has been submitted for the erection of an iron screw-pile Light-house to take the place of the Light-vessel now occupying that station. An appropriation was made many years since for this Light-house, but it was found impracticable at that time to erect it, and the appropriation reverted to the surplus fund. Congress ordered subsequently (in 1867) a survey of the shoal. An estimate is submitted.

219. *Upper Middle or Cross Ledge Light-vessel.*—No repairs have been made to this vessel since the last report. This vessel was compelled to leave her station in the Delaware Bay January 10, on account of heavy ice; was returned to it again on the 25th, and remained until the 27th, when the ice again coming down the bay very heavily she was driven from her station, and was picked up by the city ice-boat and towed to New Castle, Delaware, where she remained until March 4, when she was returned to her station. Such absences of light is a great injury to commerce, but it may be remedied by building a Light-house on the shoal.

220. *Mahon's River, Delaware, Delaware Bay.*—The abrasion of the marsh at this station has been so great as to compel a change in the site of the Light-house. There is a good location about a quarter of a mile north of the present site, which will serve equally well the purposes of navigation. The estimate for a screw-pile building is \$15,000.

221. *Reedy Island, Delaware Bay.*—Extensive repairs have been made to the bank inclosing the buildings, as follows: The earth bank has been thoroughly repaired and raised fifteen inches along the eastern side for a distance of four hundred feet, the outer slope protected with quarry stone imbedded in fresh mud, the top of the bank roughly paved with stone, a new sluice for draining, and the ditches cleaned out. A new roof has been put on the dwelling, and the plank platform repaired.

224. *Christiana, Delaware, Delaware Bay.*—Extensive operations have been going on to fit this station as a buoy depot and winter harbor for light-vessels. The upper wharf has been completed; it is thirty-two feet wide and extends into the Christiana River one hundred

four feet to eight feet water at ordinary low tide; the piling, grillage, stone piers, and stone-work of the cistern are completed for the first or upper building. The frame and other materials are so far advanced, it is believed, that it will be ready for occupation by the 1st of next September. This building will be fifty by one hundred and forty feet in plan, two stories of eight feet each in height, the first or lower floor divided into one room fifty by sixty-three feet, the balance arranged for storing iron and spar buoys, chains, ballast balls, and sinkers. The second story, fifty by one hundred and forty feet, for storing sails, rigging, small boats, &c. The piles for the foundation of the second building are all driven, the building to be fifty by one hundred and fifty feet in plan, one story of ten feet, to admit first-class iron buoys. The piles for the second wharf are also driven; the wharf is thirty-two feet wide and extends one hundred and forty feet into the river, to eight feet water at ordinary low tide. A new sluice has been placed in the bank for draining the inclosure.

*Near Chester, Pennsylvania, Delaware River.*—In conformity with the instructions of the Light-House Board, accompanied by a petition from citizens of Chester for a light at that harbor, an examination has been made by the Light-house Inspector and Engineer of the district, who report that a light upon the south end of Little Tinicum Island would subserve the wants of the trade at Chester as well as the general wants of commerce of the port of Philadelphia. It would also be serviceable in marking the channel to the quarantine grounds. The structure recommended by the Inspector and Engineer is a screw-pile Light-house with a lens of the sixth order, the estimated cost of which is \$17,000.

225. *Fort Mifflin, Delaware River.*—The foundation pier has been entirely rebuilt from line of low water, and the dwelling has been removed back from the southeastern front. Riprap stone has been placed around the front of the pier to prevent abrasion.

The stations not named heretofore are as follows:

209. *Tucker's Beach, New Jersey, near Little Egg Harbor.*

214. *Cape Henlopen Beacon, entrance to Delaware Bay.*

216. *Brandywine Shoal, screw-pile Light-house, Delaware Bay.*

221. *Cohansey, New Jersey, Delaware Bay.*

222. *Bombay Hook, Delaware, Delaware Bay.*

226. *Fenwick's Island, sea-coast of Delaware.*

227. *Assateague, sea-coast of Virginia.*

#### FIFTH DISTRICT.

The Fifth District extends from Metomkin Inlet, Virginia, to include New River Inlet, North Carolina, as well as Chesapeake Bay and its tributaries, and Albemarle and Pamlico Sounds.

*Inspector.*—Commodore F. Stanly, United States Navy.

*Engineer.*—Brevet Brigadier General James H. Simpson, Colonel of Engineers, United States Army, to December 10, 1870; Brevet Lieutenant Colonel Peter O. Hains, Captain of Engineers, United States Army, present Engineer.

In this district there are—

Light-houses and lighted beacons.....	67
Light-vessels.....	2
Day or unlighted beacons and stakes.....	72
Buoys actually in position.....	300
Spare buoys for relief and to supply losses.....	529
Tenders (steam) <i>Heliotrope</i> and <i>Tulip</i> .....	2
Tenders (sail) <i>Maggie</i> and <i>Spray</i> .....	2



The numbers preceding the names of stations correspond with the "Light House List of the Atlantic, Gulf and Pacific Coasts of the United States," issued January 1, 1871.

241. *The Light-house on "The Thimble,"* entrance to Hampton Roads, Virginia.—The want of a good screw-pile Light-house on the Horseshoe Bar, a shoal extending out from the main land at Fortress Monroe, about five or six miles in a direction east by north from that place, has long been felt. This large bar is a source of danger to all vessels coming into Hampton Roads. The shoalest point of the bar has an elevation of water at mean low tide, at a point called "*The Thimble*," about two and a half miles east of the mainland. South of Horseshoe Bar, and only a little more than half a mile from it, is another long bar, running in a direction almost parallel to it, called *Willoughby's Spit*. Between these two bars there is ample water for the largest vessels afloat. A Light-vessel has been used to mark the channel between these bars and guide them clear of the dangers on either side. It is believed, however, that the same end may be attained at much less annual expense by the erection of an iron screw-pile Light-house on "*The Thimble*" of Horseshoe Bar, under the general law on the subject and out of the general appropriation, as a substitute for the Light-vessel, to be visible from the sea at the entrance to Chesapeake Bay. The substructure will consist of seven wrought iron screw-piles; one in the center, the other six arranged about it in the form of a hexagon and screwed into the bottom to a depth of fifteen feet. The superstructure will be a hexagonal, octagonal in plan, surmounted by a lantern and with a lantern of white light of the fourth order. In order to distinguish it from the light at Fortress Monroe, the latter will be changed to a red light. The position of this Light-house being very exposed, particularly to strong easterly winds, it is required to be of more than ordinary strength. At this place, also, to protect the site and give more stability to the foundation by throwing in about it loose stones to a depth of about three feet. Borings, with an artesian well boring apparatus, were made on the proposed site, when it was found that the shoal consisted of a fine light colored sand with black specks on top and extending to a depth of ten feet. It then gradually becomes darker and finer to a depth of about four feet, at which point the borings ceased. The construction was commenced without delay, and it is hoped to have it finished by the first of December. This will render it unnecessary to retain the Light-vessel at *Willoughby's Spit*, and she will be withdrawn. She is now undergoing extensive repairs, the cost of which alone would almost suffice to build the Light-house, besides being very much less expensive to maintain. The completion of this Light-house and that off *Beacon's Point*, Chesapeake River, will complete the changes of all existing light vessels authorized in this district, to screw pile Light-houses.

*Lumber's Point.*—In the last annual report of the Light House Board, the attention of Congress was drawn to the fact that a Light-house had been strongly urged for the shoal off this point, and an appropriation for this purpose was made. The plans are now being prepared for a small substantial structure on six piles, similar to those at *Point of Shoals* and *White Shoals*, James River, omitting the attending piles, which will not be required at this station.

242. *White Shoals*, James River, Virginia.

243. *Point of Shoals*, James River, Virginia.

The two screw-pile Light-houses authorized for *White Shoals* and *Point of Shoals* were built during the past year.

244. *York Spit Light-house.*—At the date of the last annual report the

iron-work of this structure was set up, properly coupled together and braced, staging removed, and the frame of the house in position. During the month of November the joiner's work was completed, painting finished, and the lens set up. The Light was exhibited for the first time November 15, 1870, and the Light-vessel which formerly marked this dangerous shoal was permanently withdrawn. This Light-house is built on fourteen wooden piles, incased in cast-iron sleeves, and stands in twelve feet water, near the end of the shoal at the mouth of York River, from which it derives its name.

256. *Choptank River Light-house*, Maryland.—It is designed, under the general law, to replace the Light-vessel at this place, which serves to mark the entrance to the Choptank River, by an iron screw-pile Light-house, similar in construction to those at York Spit, and Wolf Trap, on the Chesapeake Bay, omitting four of the fender piles. The Light-house will stand in eleven feet water, mean tide, on a bar at the mouth of the river, distant about one and a half mile in a southwest direction from *Benoni's Point*, and marking three channels. After due public notice a contract was made in March with the lowest bidder, for the construction of this Light-house. The iron-work has been prepared and the superstructure framed. It is expected that this Light-house will be completed by the last of October, and enable the Light-vessel to be permanently withdrawn.

260. *Love Point Shoal Light-house*, mouth of Chester River, Maryland.—An appropriation of \$15,000 was made by Congress for a Light-house on the shoal at the mouth of the Chester River, near the north end of Kent Island, the exact location of which was fixed at a point on the shoal in ten feet water, mean tide, distant from *Love Point* about one mile, in a northeasterly direction. The Light-house will be a duplicate of the one constructing for Choptank River. A contract was made for the construction of this work (after publicly advertising for proposals with the lowest bidder. The contract requires the work to be finished by October 1, 1871.

*Craighill Channel*, in the Chesapeake Bay, at the entrance to the Patapsco River.—This channel extends from a point about one mile northeast of *Seven-foot Knoll*, where it intersects the Brewerton Channel, leading into the Patapsco River in a direction almost due south about five miles, or just beyond the Belvidere Shoals. It is now about two hundred and sixty feet wide, and, with the exception of a few places where there are lumps, is twenty-one feet deep. Congress made an appropriation last year of \$50,000 for the improvement of this, together with the Brewerton Channel. It is understood that a sufficient amount of this sum is to be applied to widening the Craighill Channel to five hundred feet and deepening it to twenty-two feet, mean tide. Large vessels coming up the bay to enter the Patapsco will follow this channel until the range beacons at *Hawkins* and *Leading Points* are in line. They can then follow the Brewerton Channel without difficulty into the harbor of Baltimore. The latter channel is acknowledged to be of great benefit to navigation. It can be followed at night, by means of the range beacons above referred to, as well as by day. There seems to be no doubt but that the new channel will be of equal importance to navigation, and the urgency of making it available at night for the large commerce of the city of Baltimore is manifest. This can be done by the establishment of range beacons near the north end of the channel. This channel has the advantage of saving about five miles in distance to large vessels bound to Baltimore from the lower bay; avoids much, if not all, of the dangers usually experienced from the accumulation of

ice in the lower part of the Brewerton Channel during the winter: is much easier navigated, or rather would be if range beacons were established, and, being a direct prolongation of the resultant of the united currents of the Patuxent and Chesapeake Bay, is more permanent in its character. It is an established fact that the current produced by the outflow of water from the river and bay tends to deepen the channel by washing out the material on the bottom, and there is no doubt but that this channel, once improved to a depth of twenty-two and width of five hundred feet, will always maintain at least those dimensions. There is, therefore, no doubt but that this channel will always be used for navigation purposes, and the range beacons now so much needed will always be required.

An appropriation of \$40,000 for the purpose of establishing these beacons was asked during last session of Congress. It was then proposed to locate the beacons, one on the north, the other on the south side of Miller's Island, some five miles north of the upper end of the channel. This location has the advantage of being more protected from the heavy ice from the Susquehanna than any other position that could be selected, but the distance from the southern entrance to the channel is so great, being about twelve miles, that it would be necessary to use very strong lights and to place the rear one at a considerable elevation. Their value would be much enhanced by locating them some four or five miles nearer. This can readily be done by building artificial islands and protecting the banks with a riprap wall of loose stone. The material excavated by the dredges in deepening the channel can be used for the purpose of forming these islands. It is understood that the Engineer Officer in charge of this improvement has been authorized to deposit this material for that purpose at such places as may be selected. The establishment of these beacons need not increase the number of Lights in this vicinity for the reason that they will render the use of the one at *North Point* unnecessary, and they can be discontinued. The estimated cost of the range beacons for this channel is \$45,000, for which an appropriation is asked.

280. *Long's Island Light house.*—An appropriation was made by Congress to re-establish this very important coast Light, the old Light house having been destroyed during the war. A careful study of the topography of the country, and the action of the water flow in and out of Pandoe Sound through Oregon Inlet, resulted in the abandonment of the old site on the south side of the inlet and the selection of another on the north side. This will be one of the most important Lights on the coast, and the necessity of placing it in a safe position, free from the danger of destruction by the encroachments of the sea, could not be over estimated. The old site was subject to this danger. Previous to 1846, there was no inlet at this place, but during the early part of September of that year, heavy southerly winds backed up the waters of Abasco and Pandoe Sounds several feet above their ordinary level. Then came northerly winds driving the water back, overflowing the narrow sand bank which separated the waters of the ocean from those of Pandoe Sound. By this outflow of water Oregon Inlet was opened in one night. Since that time it has maintained a character of instability, sometimes widening and deepening in places, filling up in others, and the time gradually working to the south. This inlet is not now used for navigation purposes, there being only a depth of four feet of water over the bulkhead or inside bar. During the rebellion, however, the *reters* built on the south side a fort called Fort Oregon. The site of

this fort can no longer be seen. It has been washed away in the gradual movement of the inlet to the south.

The site of the old Light, which at one time was a considerable distance from the inlet, is now only about four hundred yards. The testimony of residents in the vicinity confirms the fact that the inlet is working to the south, and that its progress is not slow. The old site could doubtless have been made use of by protecting it with jetties, but only at great expense. In view of these facts it was not deemed advisable to erect this important Light-house on a site so insecure. Another site, about one and a half mile farther north and on the north side of the inlet, protected on the west by Roanoke Island from the action of storms tending to drive the waters of Pamlico Sound toward the sea, was accordingly selected. The land at this place being held at a merely nominal sum, the purchase of fifteen acres was made, the perfection of a title in the United States being delayed, however, in getting the necessary act of the State of North Carolina ceding jurisdiction, and in complying with certain other legal forms. The site and plan of the Light-house having been determined on, contracts were made, after due public notice inviting proposals, with the lowest bidders for furnishing the material to be used in the structure. The tower will be one hundred and fifty feet high, exhibiting a first-class sea-coast Light, focal plane one hundred and fifty-three feet above the level of the sea, and will be visible at a distance of more than eighteen nautical miles. About the middle of June a working party was dispatched to this station with orders to erect the necessary temporary buildings for storage and quartering the workmen, build a narrow tramway over which the material can be easily transported from the water to the site, and a temporary wharf, on which to land it. It is expected that these preparations will be completed in about two months, when the work on the foundation of the tower itself will be begun. The completion of this tower will supply a want long felt by the commerce of the country. Every effort will be made to finish the Light-house the present year, but the frequency of storms in this latitude generally causes delay in the prosecution of works of this nature, and it is scarcely propable that the entire work will be completed within that time. An appropriation of \$15,000 for the fiscal year 1872-73 is asked to complete the work.

*A First-class Light-house between Cape Henry and Body's Island, North Carolina.*—With the completion of the Light-house at *Body's Island* there will remain only one important interval of unlighted coast on the Atlantic from the St. Croix, Maine, to about Mosquito Inlet, on the coast of Florida. That dark space will be embraced between *Cape Henry* and *Body's Island*, a distance of eighty miles and an unlighted space of forty miles, at the center of which there should be a first-order Light, so that from *Cape Henry* to *Cape Hatteras* the broad side of that long stretch of low land and dangers could not be approached within eighteen or twenty miles without seeing a warning of danger. In order to avoid the strong current of the Gulf Stream, vessels bound round *Cape Hatteras* from the northern and eastern ports run inside of the cold wall of water of that stream, within which they have a favorable current of one mile per hour on an average, and a smoother sea in bad weather; but in the absence of powerful sea-coast Lights sufficiently near each other to give warning of approach to danger, many vessels laden with valuable lives and cargoes have been lost between these points. It is now believed that the construction of this tower should be no longer delayed. A glance at the chart of the coast will show its importance. An appropriation therefor of \$60,000 is accordingly sub-

mitted. An appropriation was made about ten years ago for this Light, but the money reverted to the Treasury. The Light-house should be similar to that being built at *Bodys Island*, with a focal plane one hundred and fifty feet above the sea, and visible at a distance of eighteen nautical miles.

281. *Cape Hatteras*, North Carolina.—This important Light-house was well advanced toward completion at the date of last annual report. During the month of December the new lens was received and set up, and on the 16th of the same month the light from the new tower was exhibited. The lens on the old tower was then removed and sent to the Light-house depot at Staten Island, New York. The new tower has been covered with a cement wash to protect it from the effects of the weather, the upper part (projected against the sky) colored red, the lower part (projected against the foliage in the rear) colored white; all the iron work of stairs, lantern, &c., painted, and the tower inclosed in a neat iron fence. During the month of February the old tower, being no longer of any use and in danger of falling during some heavy storm, was taken up and totally destroyed. In addition to the finishing of the new tower, a brick dwelling for the principal keeper of the Light-station was built and inclosed in a neat picket-fence. The above completed the work at this station.

*Hatteras Inlet*, North Carolina.—A Light was authorized March 3, 1859, to be established at the Hatteras Inlet, the entrance to the sounds of North Carolina, but it was not commenced before the breaking out of the rebellion, and afterward it could not be built. This is at present the best inlet leading to and from the sounds of North Carolina, with which there is a very large trade. This inlet is fourteen miles south-west from Cape Hatteras, within the range of the influence of that cape most of the weather, and as the channel is narrow and only marked by buoys, it is dangerous to attempt to enter or pass out at night for want of a small Light. The estimated cost of this Light-house is \$18,000, for which an appropriation is asked.

286. *Cape Lookout*, North Carolina.—The tower at this station has had some repairs made to it during the present year, but the keeper's dwelling is in a very dilapidated condition, and, though improved somewhat, is too old to be susceptible of the repairs it requires. There is positive danger of the building being destroyed in stormy weather. This would leave the keepers on a desolate coast without any shelter near their station. A new building is very essential to the health and comfort of the keepers, independent of the danger to which their lives are exposed in the present dwelling. An estimate of \$10,000 is respectfully submitted to supply this defect.

During the year repairs and renovations, more or less extensive, have been made at each of the following named Light stations:

233. *Cockey Island screw pile Light-house*, Virginia, mouth of Elizabeth River.

234. *Naval Hospital Light*, on wharf at the Naval Hospital, Virginia, do. do. River.

235. *Deep Water Shoal screw pile Light-house*, Virginia, James River.

238. *Jordan's Point Light*, Virginia, James River.

234. *Fort Carroll*, Maryland, Patapsco River.

236. *Huckins' Point*, Maryland, Patapsco River, lower range beacon for the Brewerton Channel.

238. *Lazaretto Point*, Maryland, Patapsco River.

283. *Ocracoke*, North Carolina, entrance to Ocracoke Inlet.

284. *Southwest Point Royal Shoal screw-pile Light-house*, North Carolina, Pamlico Sound.

285. *Northwest Point Royal Shoal screw-pile Light-house*, North Carolina, Pamlico Sound.

286. *Harbor Island screw-pile Light-house*, between Pamlico and Core Sounds, North Carolina.

287. *Brant Island Shoal screw-pile Light-house*, North Carolina, Pamlico Sound.

288. *Neuse River Light*, North Carolina, west side of entrance to Neuse River.

289. *Pamlico Point*, North Carolina, south side of entrance to Pamlico River, Pamlico Sound.

290. *Long Shoal screw-pile Light-house*, North Carolina, east end of Long Shoal, Pamlico Sound.

291. *Roanoke Marshes screw-pile Light-house*, North Carolina, east side of channel connecting Pamlico and Croatan Sounds.

293. *North River screw-pile Light-house*, North Carolina, on bar at entrance to North River.

294. *Wade's Point screw-pile Light-house*, North Carolina, west side of Pasquotank River, Albemarle Sound.

295. *Roanoke River screw-pile Light-house*, North Carolina, near mouth of Roanoke River, Albemarle Sound.

The following are the names of the Light-stations in this district not mentioned elsewhere, some of which are now in need of repairs:

228. *Hog Island*, Virginia, west point of Hog Island, Great Matchepungo Inlet.

229. *Cape Charles*, Virginia, entrance to Chesapeake Roads.

230. *Cape Henry*, Virginia, entrance to Chesapeake Bay.

232. *Old Point Comfort*, Virginia, entrance to Hampton Roads.

239. *Cherrystone*, Virginia, mouth of Cherrystone Inlet, Chesapeake Bay.

240. *Back River*, Virginia, entrance to Back River.

242. *New Point Comfort*, Virginia, entrance to Mobjack Bay, Chesapeake Bay.

243. *Wolf Trap screw-pile Light-house*, Virginia, Wolf Trap Shoal, Chesapeake Bay.

244. *Stingray Point*, Virginia, mouth of Rappahannock River, Chesapeake Bay.

245. *Windmill Point screw-pile Light-house*, Virginia, Windmill Point Shoals, Chesapeake Bay.

246. *Watt's Island*, Virginia, Tangier Sound, Chesapeake Bay.

247. *James' Island screw-pile Light-house*, Maryland, Tangier Sound, Chesapeake Bay.

248. *Somers' Cove screw-pile Light-house*, Maryland, Tangier Sound, Chesapeake Bay.

249. *Smith's Point screw-pile Light-house*, Virginia, mouth of Potomac River, Chesapeake Bay.

250. *Frog Point*, Maryland, Smith's Island, Chesapeake Bay.

251. *Clay Island*, Maryland, Tangier Sound, Chesapeake Bay.

252. *Point Lookout*, Maryland, entrance to Potomac River, Chesapeake Bay.

253. *Hooper's Straits screw-pile Light-house*, Maryland, off mouth of Honga River, Chesapeake Bay.

254. *Core Point*, Maryland, mouth of Patuxent River, Chesapeake Bay.

255. *Sharp's Island screw-pile Light-house*, Maryland, mouth of Choptank River, Chesapeake Bay.
256. *Thomas's Point*, north side of mouth of South River, Maryland, Chesapeake Bay.
258. *Greenbury Point*, Maryland, mouth of Severn River, Chesapeake Bay.
259. *Sandy Point*, Maryland, Chesapeake Bay.
261. *Seven-foot Knoll screw-pile Light-house*, Maryland, mouth of Patapsco River, Chesapeake Bay.
262. *North Point*, (lower,) Maryland, entrance to Patapsco River, Chesapeake Bay.
263. *North Point*, (upper,) Maryland, Patapsco River, Chesapeake Bay.
265. *Hawkins' Point*, (upper,) Maryland, Patapsco River.
267. *Leading Point screw-pile Light-house*, Maryland, Patapsco River.
269. *Pool's Island*, Maryland, off mouth of Gunpowder River, Chesapeake Bay.
270. *Turkey Point*, Maryland, mouth of Elk River, head of Chesapeake Bay.
271. *Fishing Battery*, Maryland, mouth of Susquehanna River, Chesapeake Bay.
272. *Harre de Grace*, Maryland, Concord Point, mouth of Susquehanna River, Chesapeake Bay.
273. *Piney Point*, Maryland, Potomac River.
274. *Blackistone's Island*, Maryland, entrance to Clement's Bay, Potomac River.
275. *Lower Cedar Point screw-pile Light-house*, Virginia, Yates Shoal, Potomac River.
276. *Upper Cedar Point screw-pile Light-house*, Maryland, off mouth of Tobacco River, Potomac River.
277. *Fort Washington*, Maryland, Potomac River.
278. *Jones' Point*, Virginia, Potomac River, near Alexandria.
279. *Boucler's Rock screw-pile Light-house*, Virginia, Rappahannock River.
282. *Croatan screw-pile Light-House*, North Carolina, Pamlico Sound.

## DEPOTS.

The depot at *Lazaretto Point*, which was in a very dilapidated condition, has been placed in thorough repair. The work-shop has been painted inside, brick-work covered with cement wash, new slate-roof put on, and lightning-rods repaired. The wharf at the landing has also been repaired, and a contract made to have the stone wall around the front of the lot rebuilt. This work is now almost completed; the depot will then be in excellent order. A quantity of old, unserviceable material was gathered together and sold at auction, and the proceeds turned into the Treasury.

At the depot at *Portsmouth*, Virginia, the site for which was selected about a year ago, there has been a good wharf built, the lot inclosed in a board fence, and skids made on which to lay iron buoys and have them repaired.

The Engineer steam-tender *Tulip* was, at the date of the last annual report, very much in need of extensive repairs. A contract was made, after public advertisement in the daily papers, to have her hauled out on the ways and the necessary repairs made. This work was accomplished on the 10th of June. She is now in excellent condition for service. Previous to making the repairs, and since they were complet-

she has been continually employed in transporting materials, &c., to new Light-stations, and to such old ones as required repairs, and in inspecting Light-houses in the district.

#### LIGHT-VESSELS.

Upon the completion of the two screw-pile Light-houses in this district, as substitutes for Light-vessels, there will be no Light-vessels in the district.

#### SIXTH DISTRICT.

The Sixth District extends from New River, North Carolina, to include Cape Canaveral Light-house, Florida.

*Inspector*.—Captain Richard T. Renshaw, United States Navy.

*Engineer*.—Brevet Major William J. Twining, Captain of Engineers, United States Army, until June 21, 1871; Brevet Lieutenant Colonel Peter C. Hains, Captain, Corps of Engineers, United States Army, present engineer.

In this district there are—

Light-houses and lighted beacons.....	27
Light-houses and lighted beacons destroyed during the rebellion and not rebuilt.....	14
Day or unlighted beacons and stakes.....	52
Light-vessels.....	6
Buoys actually in position.....	153
Spare buoys for relief and to supply losses.....	63
Tender (steam) <i>Alanthus</i> .....	1
Tender (sail) <i>Narragansett</i> .....	1

According to previous reports there were fifty-two unlighted beacons in this district. This number includes the staked channels of the St. John's River, Florida, and the inside coast passages. Of these day-marks the greater number were destroyed or have otherwise disappeared, and are being replaced as rapidly as they are required by navigation. Of the seven beacons in the Savannah River, the two on *Oyster Rocks* are serviceable and in good condition; of the remaining five, two have been destroyed by fire and will be rebuilt. There is at present an appropriation for two beacons on *Oyster Rocks*, which will be built at an early day.

The following numbers preceding the names of stations correspond with those of the "Light-house Lists of the Atlantic, Gulf, and Pacific Coast of the United States," published January 1, 1871.

308. *Sullivan's Island Beacon*, Charleston Harbor, South Carolina.—The present beacon-light at this place is a temporary open frame-work, wooden structure, erected upon the roof of a private residence. This light was established in its present position immediately after the surrender of Charleston in the spring of 1865, to enable the vessels of the Navy and those of commerce to navigate safely at night the channel leading from the inside of the outer bar of the main channel to the turning point near Fort Moultrie. An appropriation was made by Congress, March 3, 1859, for rebuilding the two beacon range-lights on *Sullivan's Island*, (which were destroyed during the rebellion,) and on July 20, 1868, an appropriation of \$15,000 was made for rebuilding these lights; but failing to obtain valid title to the necessary land upon which to place them, and the required cession of jurisdiction by the State, the appropriation reverted to the Treasury under the operation of the fifth and sixth sections of the act approved July 12, 1870. Another appropriation of \$10,000 for these beacons was made by Congress, approved March 3, 1871. The State passed a general act ceding jurisdiction to sites pur-



chased by the United States for Light-house purposes, but it is understood that only a title of questionable validity can be given by any citizen claiming to own land on this island. This question is now being investigated. As soon as the title to the necessary land on which to locate the keeper's dwelling is obtained, there will be no unnecessary delay in establishing these important range-lights. Their establishment will render the *Wechauck Light-vessel* now placed in the channel unnecessary, and she can be permanently withdrawn. It is understood that there is now twelve feet water over the old wreck which this Light-vessel marks, and the work of removing the same is still being carried on.

The beacons proposed for this range are detached from the keeper's dwelling. Their heights are respectively thirty-five and fifty feet from sill to focal plane. The illuminating apparatus is to be of the fifth order.

414. *Light station*, entrance to the Savannah River, Georgia.—The recent gales, which have caused great damage along the southern coast, have so greatly damaged the Light-house tower at this important Light station as to render it unsafe and to require the speedy erection of a new tower. The tower, which was built in 1793, is badly cracked, and may fall at any time. Its great age, (seventy-eight years,) the frequent necessary repairs to it during the time it has been standing, and its total neglect during the war of the rebellion, render it impossible to properly repair the present tower. An estimate is submitted for commencing the erection of a new tower near the present one.

*Port Royal Island*, Calibogue Sound, South Carolina.—The appropriation asked for the range beacons on this island, to mark the entrance to Calibogue Sound, and to facilitate the passage from Port Royal Harbor to Savannah River, was made by act of Congress approved March 2, 1871. The plans and specifications have been made for the structures, and all that remains to secure a proper site before commencing work.

415. *Light-Keel*, Savannah River, Georgia.—An appropriation for erecting a screw-pile Light-house, to take the place of the Light-vessel stationed to mark this dangerous shoal, reverted to the Treasury under the act approved July 12, 1870. A screw-pile Light-house can be located at this place, which will better serve the purpose of navigation and at the same time be much less expensive to maintain than the Light-vessel. Borings show that below a thin stratum of clear, sharp sand, there is a layer of soft mud to a depth of nineteen feet at least, and perhaps considerably farther. This, though it will somewhat increase the expense, will not do so to an unwarrantable extent. The Light-house can be located in from two to five feet water, should stand on six piles, and be built somewhat similar to those in the Chesapeake Bay and sounds of North Carolina. The erection of this Light-house will also be the permanent removal of the Light vessel now stationed at this place. An estimate is submitted.

*Light to the Obstructions in Savannah River*.—An ordinary steamboat-lantern is still retained to mark the obstructions in the Savannah River below the city. It is understood that an appropriation by Congress has been made for removing these obstructions. As soon as this work is completed the Light will be no longer required and will be discontinued. Until then, the present arrangement is very economical, and answers every purpose of navigation.

416. *Fig Island*, Savannah River, Georgia.—Such repairs as were necessary for the neatness and preservation of this station were made during the spring. More extensive repairs to the platforms and foundation of the dwelling are now being made.

323. *St. Simon's*, entrance to St. Simon's Sound, Georgia.—This Light-house has been under contract since the fall of 1869, and the time for completion has been extended on several occasions, but the tower is still unfinished, and has only been carried to a height of fifty-one feet above the ground. The death of the contractor, and one of his bondsmen—both of whom died at the work—has recently caused further delay. On account of the climate, work cannot be recommenced till the 1st of November, when it will be taken in hand by the surviving bondsman, and, it is hoped, will be finished early next spring.

325. *Amelia Island, North Range*, St. Mary's Bar, Florida.—Plans and estimates have been prepared for a keeper's dwelling, and beacons for this range. As the site is on Government land, near Fort Clinch, there will probably be no delay in regard to the sites, and the work may be done during the present winter.

*Dame's Point*, St. John's River, Florida.—An examination of the site for this Light-house was made by the Engineer of the district. On sinking an artesian well, the underlying strata were found to consist of soft mud to a depth of sixteen feet. The borings were not carried below this depth. It is believed that a screw-pile Light-house can be built here, but before it is commenced further examination of the foundation will be made.

328. *St. Augustine*, north end of Anastasia Island, Florida.—An examination was made by the Engineer of the district of Anastasia Island, with reference to the selection of a site for the new Light-house provided for by appropriation approved March 3, 1871. Reports have been received from time to time in regard to the cutting away of the shore line near the old Light. On the 1st of July, 1870, the distance from the angle of the dwelling to high-water mark was seventy feet, and on the 1st of November the distance had been reduced to forty-eight feet; since that time no cutting has taken place. The channel over the bar continues to shift rapidly toward the north; as a result, the inner shoal covers for the present the site, and the force of the ebb-tide is expended along the shore-line to the west.

The opening, or partial closing, of Matanzas Inlet diminishes or increases the amount of water discharged by the Matanzas River at St. Augustine. The channel will probably continue to shift to the north, until, by the action of heavy and continued northeast winds, the accumulated waters are driven to seek a new outlet toward the southeast. Such changes are of constant occurrence at all the inlets on the coast of East Florida.

Much difficulty has been experienced in procuring a site for the new Light-house. The old Spanish grants and the claims of settlers are in much confusion, but it is to be hoped that the question may be settled by the law officers of the Government at an early day, and that a good title may be obtained to a site which will be safe from encroachments of the sea. The construction of the tower, which will be of the first order, one hundred and fifty feet above the sea, will be commenced as soon as title can be secured.

*Mosquito Inlet*, east coast of Florida.—The Engineer of the district has visited *Mosquito Inlet* for the purpose of reporting on the necessity and practicability of a Light at that point. In common with all the inlets and harbors on the east coast of Florida, this bar shifts constantly, so that no soundings can be relied on. The general effect of westerly winds is to reduce the depth of water, and that of northeasterly gales to increase it; thus the inlet may be opened or closed one or more times each year. The wrecks lying on or near the bar give a practical illus-

tration of the uncertainty of the channel. For all practical purposes of construction of a Light house, it may, however, be safely assumed that the material can be delivered without any very serious difficulty or delay, although additional expense would be incurred by reason of the remoteness of the station, and the small-sized vessels that would be required for transportation. As regards the necessity of a Light at this point, it is manifest that the commerce passing through the inlet would not justify an expenditure by the United States for a Light for merely local purposes, or at least that there are other points that may justly take precedence of it. But a Light-house between St. Augustine and Cape Canaveral Lights is necessary as one of a system of coast-lights, and *Mosquito Inlet* is undoubtedly the proper site, as, in the first place, the Light there would answer the double purpose of a harbor and coast guide, and in the second for a landing place, both for the original construction and subsequent supply and inspection, which could be made with more safety and certainty there than at any other point along the open sea-beach. A tower one hundred and fifty feet high, lighted by a first order Fresnel lens, is recommended for this position, and for the commencement of its construction an estimate of \$60,000 is submitted.

At each of the following-named Light-stations there have been repairs and renovations, more or less extensive, during the last year, viz:

- 297. *Federal Point*, North Carolina, New Inlet, Cape Fear River.
- 299, 300. *Oak Island*, (Range lights,) North Carolina, mouth of Cape Fear River.
- 301. *Georgetown*, South Carolina, entrance to Winyaw Bay.
- 308. *Sullivan's Island*, Charleston Harbor, South Carolina.
- 309. *Fort Sumter*, Charleston Harbor, South Carolina.
- 310. *Castle Pinckney*, Charleston Harbor, South Carolina.
- 311. *Coahuhee Bank*, entrance to St. Helena Sound, South Carolina.
- 314. *Tybee Beacon*, Georgia, Tybee Island.
- 316. *Cockspur*, Georgia, Savannah River.
- 317. *Oyster Beds*, Georgia, Savannah River.
- 318. *Fig Island*, Georgia, Savannah River.
- 319. *Sapelo*, Georgia, entrance to Doboy Sound.
- 320. *Sapelo Beacon*, in front of main light.
- 321, 322. *Wolf Island*, Georgia, entrance to Doboy Sound.
- 323, 326. *Amelia Island*, Florida, St. Mary's Bar, Fernandina.
- 327. *St. John's River*, Florida.

The following are the names of Light-stations in this district not mentioned elsewhere:

- 302. *Cape Romain*, South Carolina.
- 303. *Buffa Bay*, South Carolina.
- 305, 306. *Morris Island Range-lights*, South Carolina, entrance to Charleston Harbor.
- 313. *Tybee*, Georgia, entrance to Savannah River.
- 324. *Little Cumberland Island*, entrance to St. Andrew's Sound, Georgia.

#### LIGHT-VESSELS.

The Light-vessel belonging to the *Frying-Pan Shoals Station* was driven from her station during the winter by heavy weather, rendering it necessary to send the relief vessel which now occupies that station.

The *Frying-Pan Shoals Light-vessel* has been repaired at Charleston and sent to take the place of the *Martin's Industry Light-vessel* which was driven from her station during a recent heavy gale. This latter

vessel is now at Savannah undergoing repairs, which will be very extensive and expensive.

*The Rattlesnake Shoals Light-vessel*, off Charleston Bar, having been reported leaking very badly and unsafe, has been withdrawn, and Light-vessel No. 38 (Relief) has been towed to Charleston for that station until the former is repaired.

#### TENDERS.

The Engineer of the district has had the schooner *Narragansett* to attend to all the repairs, and carry supplies, &c., for works of construction. The steam-tender *Dandelion* is now there, being fitted out, and will soon be ready for service.

#### SEVENTH LIGHT-HOUSE DISTRICT.

This Light-house District extends from south of Cape Canaveral to, and including, Cedar Keys, Florida.

*Inspector*.—Commander C. A. Babcock, United States Navy.

*Engineer*.—Brevet Colonel C. E. Blunt, Lieutenant Colonel of the Corps of Engineers, United States Army.

In this district there are—

Light-houses.....	11
Day or unlighted beacons.....	35
Stakes.....	15
Buoys actually in position.....	99
Spare buoys for reliefs.....	61
Tender, (tug,) <i>Ivy</i> (employed by Engineer in constructions and repairs).....	1
Tender (sailing schooner) <i>Florida</i> .....	1

The numbers preceding the names of the Light-stations correspond with those of the Light-house List for 1871.

At each of the following-named Light-stations there have been repairs and renovations during the last year:

334. *Dry Bank*, iron-pile Light-house, Florida Reefs, off coast of Florida.

335. *Sand Key*, iron-pile Light-house, Florida Reefs, off coast of Florida.

336. *Key West*, Key West Island, Florida.

337. *Northwest Passage*, iron-pile Light-house, near Key West, Florida.

338. *Dry Tortugas*, Loggerhead Key, Florida.

339. *Dry Tortugas Harbor*, Fort Jefferson, Florida.

During the ensuing year repairs and renovations will probably be needed at the remaining stations in the district, which are—

330. *Jupiter Inlet*, east coast of Florida.

331. *Cape Florida*.

332. *Carysfort Reef*, iron-pile Light-house, Florida Reefs, off coast of Florida.

340. *Egmont*, entrance to Tampa Bay, Florida.

341. *Cedar Keys*, entrance to Cedar Keys, Florida.

Principal repairs at *Dry Bank Light-house*, scraping, painting, and coal-tarring of iron-work, lower section, &c.

At *Sand Key*, the same, (with a new boat-house.)

At *Northwest Passage*, the same.

At *Dry Tortugas*, new boat-house.

At *Dry Tortugas Harbor*, some slight repairs on keeper's dwelling and out-buildings, and on lantern.

Besides these repairs and renovations one more of the iron day-bea-

cons. marking the line of the Florida Reefs, has been erected, viz: *Beacon D*, at Crocker's Reef.

Preparations for the erection of the iron-pile Light-house on Alligator Reef have been commenced. Indian Key, the nearest land (four miles) from the proposed site, has been selected as a depot, and the temporary buildings and wharf have been well advanced. It is expected that the work of erection will commence early next winter, (by which time the contractors will have delivered the materials at the depot,) and will be prosecuted as rapidly as the unfavorable circumstances attending all engineering operations along the Florida reefs will permit.

The erection of the day-beacons on the reefs will also be prosecuted as rapidly as possible. An additional number of beacons, which will be needed to complete the line, have been ordered at the North.

#### BUOYAGE.

The buoyage in this district is in excellent condition. There are at present ninety-eight buoys actually in position. It has been found necessary to put down several buoys in *Haick Channel*, (inside the Florida reefs,) leading into *Key West Harbor*, *Tortugas Harbor*, *Calrose Entrance*, and *Cedar Keys*, Florida. To effectually mark the entrance to, and channel leading into *Cedar Keys Harbor*, extra buoys have been put down, and fifteen palmetto stakes, marked, painted, and numbered according to instructions, driven on either side of the channel.

#### TENDERS.

The steam-tug *Iry* has been employed in the Engineer's Department during the past year.

The sailing schooner *Florida* has been in this district for many years, employed in looking after buoys, delivering supplies, other than annual, and for visiting the Light-stations periodically. These Lights are all at remote and isolated points, and can only be reached by a vessel.

The great extent of this sparsely populated coast, embracing the dangerous Florida coast reefs, and the great increase in the number of aids to navigation to be looked after, renders it necessary to have the use of a small steam-tender in place of the small sailing schooner, now over twenty years in service in that district, and an estimate is submitted.

#### EIGHTH DISTRICT.

This District extends from Cedar Keys, Florida, to the Rio Grande, Texas.

*Inspector*.—Commander William P. McCann, United States Navy.

*Engineer*.—Brevet Major A. N. Damrell, Captain of Engineers, United States Army, (east of Pearl River,) to December 4, 1870; M. F. Bonzano, esquire, (west of Pearl River,) to July 1, 1871; Brevet Brigadier General James H. Simpson, Colonel of Engineers, United States Army, present Engineer.

In this district there are—

Light-houses and lighted beacons .....	47
Fly or unlighted beacons .....	15
Boys actually in position .....	97
Spare buoys for relief and to supply losses .....	139

Light-vessels .....	1
Tender (steamer) <i>Geranium</i> .....	1
Tender (steam-tug) <i>General Poe</i> .....	1
Freight schooner <i>Magnolia</i> .....	1

The numbers preceding the names of the stations correspond with those of the Light-house list of January, 1871.

342. *St. Mark's*, Florida.—Repairs have been made to the tower, and the new dwelling for the keeper has been completed.

346, 347. *Pensacola*, Florida.—The main and beacon lights have been repaired during the year.

348. *Sand Island*, Alabama, entrance to Mobile Bay.—The new masonry tower, with focal plane one hundred and twenty feet above the sea, is in progress at this station.

350. *Mobile Harbor*, Alabama, to mark the entrance to Mobile Harbor.—The screw-pile Light-house for this station is now being prepared at the work-shops at the North under contract.

355. *Cat Island Light-station*, Mississippi Sound.—The iron screw-pile Light-house at this place is nearly completed, and the Light will be exhibited at an early day.

357. *Merrill's Shell Bank Light-station*, Mississippi Sound.—Repairs have been made at this Light-station during the year.

359. *East Rigolet*.—The brick tower is in good order, exhibiting a Light of the fourth order, capable of affording all desirable facilities to navigation. The dwelling-house is old and not worth the extensive repairs necessary to put it in good condition. A new frame dwelling, and new cypress cistern of three thousand gallons' capacity, should be built at this station, and an estimate is submitted.

360. *Proctorville Beacon*.—The available appropriation (\$5,000) for a building on the plan of the Light-house at *Head of the Passes*, placed on a pile foundation, is insufficient, and if, on further examination, it is found best to place the Light at this point, the appropriation should be increased to \$7,500.

Since the last annual report a canal has been made by a company called the "Mississippi and Mexican Gulf Canal Company," with the intention of affording a passage to vessels of ten feet draught, from the Mississippi River into Lake Borgne. The northern terminus of this canal adjoins Tower Dupré, on which the Light destined for the old site at Proctorville, the former terminus of the abandoned Mexican Gulf Railway, might be placed with much greater advantage to commerce and navigation. There would probably be made no military objection to the placing of a Light on the tower itself.

The canal, though finished the entire distance, has not yet been connected by locks with the Mississippi River, nor has it attained, at its entrance into Lake Borgne, the projected depth of ten feet. The canal is, however, useful, for light draught vessels, from Lake Borgne, and thus furnishes a harbor of refuge, which Proctorville is not. The appropriation, though insufficient for the structure contemplated on the original site, is sufficient for establishing a serviceable Light on Tower Dupré, and it is therefore recommended that a re-appropriation should be made of the amount now available, and that the Board be empowered to place the Light at Tower Dupré or at Proctorville, as may be found advisable.

361. *West Rigolets*.—The repairs recommended in former annual reports, i. e., the putting a slate roof on the house, rebuilding the wharf, plank-walk, and breakwater, should be made at an early date. The building has sustained some additional damage in the late high water.

The foundation of the cistern has settled and should be rebuilt on a larger area, as the ground is very soft; a timber platform, sunk about two feet below the surface, covered with a layer of concrete, and upon that a brick foundation rising four feet above the ground, is probably the best foundation for this locality; an estimate is submitted.

**362. Port Pontchartrain.**—A new dwelling, on a substantial pile foundation, with kitchen fifteen by thirty feet, cistern of three thousand gallons, and a plank-walk, connecting with the wharf of the Pontchartrain Railroad, was contracted for during the last season. The house was nearly completed at the expiration of the fiscal year, and but for the extensive inundation, caused by an extraordinary rise of the waters of the lake, which interrupted the progress of the work, would have been finished before that time. All the work contracted for will be finished about the 1st of August.

**363. Bayou St. John.**—The difficulty of exhibiting this Light in bad weather, by reason of the unsuitable form of the structure and the great distance of the keeper's dwelling from it, the hazardous approach to it, over an embankment and rotten wharf of the canal company, which, in heavy weather, are washed by the sea, has been brought to the notice of the Board.

The most economical, suitable, and lasting structure would be a screw-pile structure, on the plan of those recently ordered for Matagorda Bay. The rise of Lake Pontchartrain, in hurricanes, may be estimated at fully *five feet* above ordinary high water. On this assumption the floor of the new Light house should not be less than nine feet above ordinary high water, for the reason that the sea, backed up, first, by the easterly and northeasterly hurricane winds, and then acted upon by the free sweep of the norther, or northwester, over a space of twenty-two miles, will rise in waves of prodigious height, to which severe gales, in ordinary stages of the water, afford no comparison. During the inundation of June last the water rose within a couple of inches of the storm level of 1870, the effect of gales from the eastward, which did not reach the lake itself. But for this fortunate circumstance, the destruction of the Pontchartrain Railway wharf would have been imminent, and the embankments of the new and old canal would have received severe damage. It is deemed of great importance to provide against these extraordinary storms, which, though rare, are nevertheless to be expected from time to time, by establishing structures of such strength and elevation as to render them capable of resisting the force of wind and waves, and giving the requisite security to the inmates.

**364. New Canal.**—Some slight repairs to roof, plastering and cistern, are required, as also painting inside and outside.

**365. Tchepoucti.**—During the high water in June last the sheet-planking on the edge of the water was damaged, the outside steps of the dwelling swept away. They will be repaired during the coming season.

**366. Pass Manchac.**—The breakwater appropriated for will be built during the coming winter.

**367. Chandeleur Island.**—The repairs, consisting of strengthening the screw-piles by connecting them with each other by diagonal braces, new cistern, new roof, new floors, new steps, plastering, and painting, are required. They will be executed during the coming season.

**Errol Island, Louisiana.**—The proximity of this outlying island to the dangerous shoals of Grande Gosier, to the northward of *Pass à l'Ouvre Light-house*, distant twenty-three miles, and midway between the *Pass à l'Ouvre* and *Chandeleur* Lights, marks it as the proper location for a Light to fill up the dark space in the approaches to the northern mouth

of the Mississippi River. The only structure offering a reasonable prospect of stability in a locality so exposed to wind and sea, is an iron screw pile tower, for the erection of which an estimate of \$30,000 has been submitted in the annual estimate for the next fiscal year.

368. *Pass à Loutré*.—Station is in very good order. The steam Fog signal recommended in the annual report of last year is now under construction.

369. *South Pass*, mouth of the Mississippi, Louisiana.—The Light house at this, the most seaward point of the delta of the Mississippi and therefore of the importance of a first-class sea-coast Light, was built in 1831, and is only a low wooden tower on the top of the keeper's dwelling. The grave objections to a wooden structure at so distant a point from succor in the case of fire, and one occupying so important a position, (being only of the third-class,) have been mentioned in the several annual reports from this Board since 1867. The remarks previously made have acquired additional force from the fact that the natural decay of so perishable a material, and the age of the structure, render a new tower at no distant day indispensable, even in an economical point of view alone. An estimate of \$75,000 for commencing the work is submitted.

370. *Head of the Passes*.—Slight repairs were made during the year to the breakwater, and the house was thoroughly painted. The station is now in excellent condition. The space inclosed by the breakwater is still filling up with solid ground; a dense growth of young willows is now spreading over it.

371. *Southwest Pass*.—The foundation for the new iron Light-house was finished by the end of the month of May last, and is now ready for the superstructure which is now being constructed under contract in Ohio.

A steam Fog-signal has been authorized. This may be placed in the southeast or southwest corner of the coffer-dam, where it will be very conveniently accessible at all times. It is now being constructed at the North.

The pile foundation for a keeper's dwelling is also in readiness to receive the superstructure.

The old Light-house remains in the same condition as last reported. It will last, dilapidated as it is, until the new Light is ready, and no repairs of any kind are needed. In the event of its complete destruction, which, however, is hardly to be apprehended, a temporary Light may be established on the wharf of the new work in a few days.

373. *Ship Shoal*.—The tower requires coating with coal-tar. The depth of water under the tower has sensibly decreased since the screw-piles were surrounded with a layer of stone concrete. The tower was then thoroughly cleansed with a solution of caustic potash and coal-tarred. The tanks, rain-leaders, pipes, &c., were coated with hot coal-tar inside.

*Timbalier Island*, intermediate between Nos. 342 and 343 of the Light-house List of 1871.—An iron screw-pile Light-house, with focal plane one hundred and twenty-five feet above the sea, will be erected at this place. The land of the Government, upon which the old brick tower stood, has been entirely washed away. The island being uninhabited and subject to dangerous overflows, in fact a low, barren sand-reef, unfit for cultivation, no difficulty in obtaining a new site is apprehended. The new Light-house will be placed in a convenient depth of water inside the island, which, in this case, will be an effectual breakwater. The location will also be at some distance from the eastern point of West Timbalier Island, (toward the west,) because the point is subject to abrasion. The bay affords



secure shelter for the vessels used in construction. The plans for this Light-house are completed, and it will be soon under contract.

*Trinity Shoal*, intermediate between Nos. 364 and 365.—A survey of this shoal was commenced by the United States Coast Survey in April and May, but not finished. An iron screw-pile Light-house, one hundred and twenty-five feet above the sea, will be contracted for at an early day for this shoal: the plans are completed.

*Calcasieu Pass*, intermediate between Trinity Shoal and Sabine Pass.—Inquiries have been made with a view to obtain possession of a suitable piece of land for the new Light-house. There seems to be much confusion in the claims of various parties, so that the only certain mode to acquire possession is by the operation of the laws passed at the last session of the legislature of Louisiana. The new Light house authorized at this point will be erected during the next working season.

375. *Sabine Pass*.—The tower is in good order. The keeper's dwelling requires a new roof, new floors, and general repairs, which will be executed during the next season.

377. *Bolivar Point*.—An attempt was made to purchase a new site for the Light-house at such a point that the establishment of two Range Lights would have given perfect ranges over the bar and through the channel of the harbor. The negotiations failed. In consequence of the failure to obtain a new site, the Board ordered the foundation for the new tower to be placed on the old site, which was accordingly done. The foundation is complete. A dwelling for the light-keeper, on the plan of that at *Pass à l'Ouvre*, has been finished. The iron Light-house for this place is now under construction at the North.

381. *Matagorda*.—The new Light-house authorized at this place will be constructed during the fiscal year.

383. *Scurrah*.—The screw-pile Light-house for this point is under construction at the North.

*Deerou's Point*.—The refusal of the owner to sell any land to the Government made it necessary to abandon the first plan of placing a couple of Range Lights on the land, and to substitute therefor a screw-pile Light house, which is now under contract at the North.

385. *Erdrum Island Beacon*.—A new iron structure is recommended for this point, on account of the rotten condition of the present temporary tower being subject to destruction in heavy gales. Estimates submitted.

*Atchafalaya Bay*.—The beacons marking the entrance to this bay are in good order.

*Isopot*, at head of the Passes.—The buildings authorized were finished by the end of the year.

#### TENTH DISTRICT.

This District extends from the mouth of St. Regis River, New York, to include *Grassy Island Light-house*, Detroit River, Michigan.

*Inspector*.—Commodore Gustavus H. Scott, United States Navy.

*Engineer*.—Brevet Lieutenant Colonel George L. Gillespie, Captain of Engineers, United States Army.

In this district there are—

Light-houses and lighted beacons .....	55
Day or unlighted beacons .....	0
Boys actually in position .....	72
Boys for relief to supply losses .....	90
Tender (steamer) <i>Haze</i> , common to Tenth and Eleventh Districts.....	1

The numbers preceding the names of stations correspond with those

of the "Light-house List of the Northern and Northwestern Lakes of the United States," issued January 1, 1871.

446. *Ogdensburg*, New York, St. Lawrence River.—The renovation of this station commenced August 23, 1870, as mentioned in the last annual report, was continued during the working season and finally completed June 9, 1871. The sea-wall protecting the lot has been raised throughout its whole length; the space inclosed filled with loam and rich earth graded and sown with grass, and shade-trees planted on the land front. The station is now in excellent condition.

453. *Sackett's Harbor*, New York, Lake Ontario.—The renovation of this station, commenced in August, 1870, and mentioned in the last annual report, was continued during the working season and finally completed April, 1871. A neat picket-fence incloses the dwelling and small garden; shade-trees have been set out on the land side, and the old house and débris have been removed. The grounds are now in excellent condition.

456. *Pier-Head*, Oswego, New York, Lake Ontario.—The pier-head of the west pier has been marked by a Light exhibited from a small glazed box fitted to the top of a mast, framed into the pier. The west pier is very much exposed to high seas, and at times it is impossible for the keeper to reach the pier-head. To insure the maintenance of the Light at the pier-head, two  $\frac{3}{4}$ -inch galvanized wire ropes connect the top of the mast with iron bars, fastened inside the stone tower at the second window, and serve to support a lantern six inches in diameter, showing a fixed white Light, that is run upon them from the tower to the mast. The working of the device has, so far, been entirely satisfactory.

*Fair Haven*, New York, Little Sodus Bay.—An appropriation was made March 3, 1871, for the erection of a pier, Light-house, and dwelling for the keeper at this station. The station was visited May 26, 1871, when it was decided to mark the approach to the harbor by a frame beacon to be established on the pier on the west side of the channel, and a suitable site for the keeper's dwelling was accordingly purchased. As soon as the necessary papers vesting title in the United States shall have been submitted and approved by the Attorney General, proposals will be publicly invited for the construction of a frame dwelling for the keeper. The Light will be of the fourth order, fixed, white, in a frame tower, provided with hauling apparatus for pier-head Light. The focal plane of the Light will be forty feet above the pier.

459. *Big Sodus Bay*, Lake Ontario.—The renovation of this station commenced in August, 1870, and, as mentioned in the last annual report, was continued during the working season, and finally completed June 30, 1871. The old tower and house have been removed from the lot, and the stone and débris formed into a rough jetty extending into the lake at the west end of lot, to prevent a threatened wear of the bank. The jetty is seventy feet long, with a twenty-foot base, and extends to nine feet of water. The station is in fine order.

462. *Oak Orchard*, New York, Lake Ontario.—An appropriation was made July 15, 1870, for a Light-house at or near the mouth of Oak Orchard Creek, New York. After a careful examination of Oak Orchard Harbor, and the shore-line in the vicinity, it was deemed best to mark the approach to the harbor by a frame beacon placed upon the west pier. In accordance with this decision, one-half acre of land on the west bank of the creek, near its mouth, was purchased as a site for the keeper's dwelling. During the winter the title-papers of the lot were received and forwarded to the Attorney General, and by him examined and approved. For the supply of the necessary material for the

dwelling and beacon sealed proposals were publicly invited and contracts made. Work was commenced March 30, 1871. The dwelling is a one-story and attic frame structure, with a room especially arranged for the accommodation of the beacon supplies. The beacon was finished June 10, and the Light, which is of the fourth order, fixed, white, was exhibited for the first time on the evening of June 17, 1871. The dwelling was finished and the keeper installed June 22, 1871.

463. *Fort Niagara, New York, mouth Niagara River.*—An appropriation was made March 3, 1871, for rebuilding the Light-house at this station. Plans have been prepared for a stone tower with oil-room attached, to be placed on the extreme eastern end of the Light-house lot. Proposals are now invited for the necessary material for tower and oil-room. As soon as the material can be delivered under contract, the work will be commenced and pushed to completion. The tower will be of coursed rubble-stone, eighteen feet diameter at the base, and eleven feet at the top of the cornice. The height of the focal plane above the surface of the ground will be forty-five feet. The order of the Light will not be changed.

465. *Buffalo Breakwater, (north end.) Buffalo, New York.*—It was stated in last annual report that "an appropriation was made July 15, 1870, for a beacon-light on each end of the breakwater in this harbor." As the breakwater is not finished, it was only possible to make arrangements for the construction of the beacon to occupy the north end. The appropriation would not admit of a very elaborate structure, and as it is difficult, if not impossible, to reach the breakwater at certain seasons of the year, in any way short of a steam-tug, it was found necessary to arrange a structure that should contain quarters for the keeper. These considerations, taken in connection with the depth of water at the site, made it imperative to use timber in the construction, on account of its cheapness. Proposals were publicly invited for the supply of the necessary material, and contracts have been made for the iron, stone, and timber, and for the framing of dwelling. On May 18, a crib forty feet square was sunk twenty feet *behind*, and twenty-three feet *from* the north end of the breakwater, and the framing carried to the surface of the water. To allow settlement to take place, work was suspended till June 15, when six more courses were added. Work was again suspended till June 24, when it was resumed. The pier of protection is twelve feet above the level of the lake, and the beacon, which will be elevated eight feet above it, will be supported by heavy upright oak timbers securely framed into the pier, the oak timber being firmly held by adjustable wrought iron rods. On the west side of the beacon, twenty-four feet above the water, a fog bell will be arranged, striking three times in quick succession, at intervals of thirty seconds. The striking apparatus will occupy one of the rooms of the beacon. It is expected that this work will be completed by September 15, 1871. The Light will be of the fourth order, fixed, red, the focal plane thirty-seven feet above the level of the lake.

466. *Buffalo Breakwater, (south end.) Buffalo, New York.*—It is proposed to mark the unfinished south end of breakwater by a temporary frame beacon, with the focal plane twenty-eight feet above the lake level. For a height of ten feet above base it will be of open framework, strongly braced, to give the waves, as nearly as possible, uninterrupted passage over the breakwater. The fog-bell for this station, which is to strike continuously at intervals of ten seconds, has been delivered.

The Light will be of the fourth order, fixed, white. The proposed

length of breakwater is four thousand feet; at present only seventeen hundred and fifty feet have been built. If the usual annual appropriations are made, the residue should be built in three to four years. In view of this distant date of completion of work, no appropriation is asked at present for the construction of the beacon to mark the south end.

467. *Buffalo, New York, Lake Erie.*—An appropriation was made March 3, 1871, for the reconstruction and improvement of the wharf in front of Light-house depot. Sealed proposals for the supply of the necessary material and for the labor were publicly invited, and contracts for the supply of the timber, stone, iron, and framing were made. Work was commenced June 10. The old crib-work has been entirely removed, and the contractor is now dredging along the front of the lot preparatory to sinking the cribs of the new pier. The pier will be two hundred and sixty-four feet long by twelve feet wide, and sunk six feet below water-level. It is expected that it will be completed by September 1, 1871.

• *A Lake-coast Light on the northern side of Presqu'isle, Lake Erie,* has been petitioned for. An estimate has been submitted, accordingly, of \$15,000.

475. *Conneaut, Ohio, Lake Erie.*—An appropriation was made March 3, 1871, for building a light-keeper's dwelling at this station. Plans and specifications of the dwelling have been prepared, and proposals will be invited for the construction under contract, when the title-papers of the lot purchased for the site have been examined and approved by the Attorney General of the United States.

476. *Ashtabula, Ohio, Lake Erie.*—An appropriation was made March 3, 1871, for building a light-keeper's dwelling at this station. Plans and specifications of the dwelling have been prepared, and sealed proposals will be publicly invited for the construction under contract, when the title-papers of the lot purchased for the site have been examined and approved by the Attorney General of the United States.

477. *Grand River, Fairport, Ohio, Lake Erie.*—An appropriation was made March 3, 1871, for completing the tower upon which work had been stopped by act of July 12, 1870, and for the reconstruction of the keeper's dwelling. The new dwelling will be a one-story and attic brick structure, placed upon the site of the old one, and connected with the tower by a brick covered-way. Sealed proposals for the supply of the necessary material were publicly invited, and contracts were made for the lumber, rubble-stone, and brick. The stone for the tower being already on hand and dressed ready for laying, work was resumed on the 20th of May. The tower is now nearly finished, and it is expected that the Light can be exhibited by the 15th of August. The order of the Light will not be changed. A great part of the material for the dwelling has been delivered, and the construction has advanced above the water-table. The station will be in complete order by the 20th of September.

479. *Cleveland, Ohio, Lake Erie.*—An appropriation was made March 3, 1871, for rebuilding the Light-house at this station. Sealed proposals were publicly invited for the supply of the material necessary for the construction of a stone wall to inclose the grounds on the north and east sides, and for a third-order lantern complete, with stairs for the tower, and contracts have been made. The stone and cement were delivered early in June, and work was commenced on the 24th of June. It is recommended that the appropriation for this station be extended to June 30, 1873.

482. *Black River, Ohio, Lake Erie.*—This station has no keeper's dwelling. An appropriation of \$4,000 is recommended for the construc-

tion of a dwelling similar to the one to be constructed at Ashtabula, Ohio.

483. *Vermillion, Ohio, Lake Erie.*—An appropriation was made March 3, 1871, for building a light-keeper's dwelling at this station. The station was visited May 18 for the purpose of selecting and purchasing a suitable site. No suitable vacant lot could be purchased that was easily accessible from the piers, and from which the beacon could be seen, and in consequence a purchase was made of a lot with a new house upon it, containing every convenience for a keeper's dwelling. Occupation will take place when the papers necessary for vesting title in the United States have been examined and approved by the Attorney General.

484. *Huron, Ohio, Lake Erie.*—An appropriation was made March 3, 1871, for building a light-keeper's dwelling at this station. The station was visited May 17, for the purpose of selecting and purchasing a suitable site. A purchase was made, but the owner of the lot has since refused to give a title. Further efforts will be made to obtain a suitable lot.

485. *Cedar Point, Lake Erie, near Sandusky, Ohio.*—It is proposed to establish a Fog-bell at this station before the close of the season.

490. *Turtle Island, Lake Erie, near Toledo, Ohio.*—It is proposed to establish a Fog-bell at this station before the close of the season.

491. *Maumee Outer Range, Toledo, Ohio.*—An appropriation was made March 3, 1871, to build a light-keeper's dwelling at this station. Sealed proposals were publicly invited to June 3, for the construction of the dwelling, and a contract has been made. It will be a frame dwelling, one story and attic, placed on the west end of the range, and behind the inner range tower. It is expected that the dwelling will be ready for occupation by the 20th of September.

498. *Gibraltar, Lake Erie, mouth of Detroit River, Michigan.* An appropriation of \$10,000 is recommended to rebuild the tower and keeper's dwelling at this station. The present buildings are very old, and not worth repairing.

At each of the following-named stations there have been repairs and renovations more or less during the last year:

449. *Sunken Rock, St. Lawrence River.*

450. *Rock Island, St. Lawrence River.*

452. *Gallow Island, Lake Ontario, entrance to St. Lawrence River.*

455. *Onwego, New York, Lake Ontario.*

460. *Genesee, Charlotte, New York, Lake Ontario.*

464. *Horneshoe Reef, Buffalo, New York, Lake Ontario.*

471. *Praquish Beacon, Range No. 1, Erie, Pennsylvania.*

472. *Praquish Beacon, Range No. 2, Erie, Pennsylvania.*

485. *Cedar Point, Sandusky, Ohio, Lake Erie.*

497. *Monroe, Monroe, Michigan, Lake Erie.*

The following-named Light-stations require repairs to be made during the ensuing year:

461. *Genesee Beacon, Charlotte, New York, Lake Ontario.*

464. *Horneshoe Reef, Buffalo, New York.*

468. *Dunkirk, Dunkirk, New York, Lake Erie.*

473. *Peninsula Beacon Range, No. 1, Erie, Pennsylvania.*

478. *Grand River, Fairport Beacon, Fairport, Ohio, Lake Erie.*

488. *Green Island, Green Island, Lake Erie.*

490. *West Sister Island, Lake Erie.*

493, 494. *Maumee Middle Range, Toledo, Ohio.*

495. *Monroe, Monroe, Michigan, Lake Erie.*

499. *Mamajuda, Detroit River.*

500. *Grassy Island, Detroit River.*

The following are the names of the Light-stations in this district not mentioned elsewhere:

- 447. *Cross-over Island*, St. Lawrence River.
- 448. *Sister Islands*, St. Lawrence River.
- 451. *Tibbett's Point*, entrance to St. Lawrence River.
- 454. *Stony Point*, Lake Ontario.
- 457, 458. *Big Sodus Range Beacons*, Lake Ontario.
- 469. *Dunkirk Beacon*, Dunkirk, New York, Lake Erie.
- 470. *Erie Harbor*, Erie, Pennsylvania.
- 471, 472. *Presqu'isle Beacon Ranges*, Nos. 1 and 2, Erie, Pennsylvania.
- 480. *Cleveland Beacon*, No. 1, Cleveland, Ohio.
- 481. *Cleveland Beacon*, No. 2, Cleveland, Ohio.
- 486. *Cedar Point Range*, Sandusky, Ohio.
- 487. *Marblehead*, Sandusky, Ohio.
- 495, 496. *Maumee Inner Range*, Toledo, Ohio.

An estimate is submitted for a steam-tender for the Inspector and Engineer of the Tenth Light-house District, rendered necessary by the large increase in the number of Lights requiring repairs and supplies, buoys and other aids to navigation in the Northern and Northwestern lakes since 1865, which it is found cannot be effectually attended to by the tender stationed at Detroit for Lakes St. Clair, Huron, Michigan, and Superior. The buoy service, which has heretofore, and is now, mainly performed under contract with private individuals, is not satisfactory, and can only be properly performed by a small steam-vessel.

#### ELEVENTH DISTRICT.

The Eleventh District embraces all aids to navigation on the Northern and Northwestern Lakes above Grassy Island Light-house, Detroit River.

*Inspector*.—Commodore Alexander Murray, United States Navy.

*Engineers*.—Brevet Brigadier General O. M. Poe, Major of Engineers, United States Army.

There are in this district—

Light-houses and lighted beacons .....	91
Day or unlighted beacons .....	2
Buoys actually in position .....	144
Spare buoys for relief and to supply losses .....	60
Tenders (steam) <i>Warrington</i> and <i>Haze</i> .....	2
Tender (sail) <i>Belle</i> .....	1

The numbers preceding the names of stations correspond with the "Light-house List of the Northern and Northwestern Lakes of the United States," issued January 1, 1871.

504, 505. *Saint Clair Flats*, new channel.—By the act of July 12, 1870, returning to the Treasury the available funds, work on these Light-houses was suspended while in full progress, and it was not until the appropriation of March 3, 1871, became available that operations could be resumed. An adequate working force is now upon the ground, and the two stations will be ready for occupancy before the close of the season. Meanwhile, temporary structures have been erected, and every thing is in readiness to exhibit lights, as soon as the announcement is made that the channel is open to navigation.

506. *Fort Gratiot*, Lake Huron.—Under the provisions of the appropriation of March 3, 1871, for a Fog-signal at this station, one is now under construction, and will be in operation before the close of the season.

*A Light-house between Fort Gratiot and Point Aux Barques, Lake*

*Huron*.—The last annual report contained the following, which is again submitted, in the hope that the necessary appropriation may be made :

An additional coast Light, between *Fort Gratiot* and *Point Aux Barques*, Lake Huron, and recommended in last year's report, is very much needed.

The distance between the two places is seventy-five miles, for the whole of which ~~there~~ is kept the shore well aboard while going in either direction.

The amount required for such a Light-house, including the purchase of the land, will be about \$30,000.

*Range lights at the mouth of Saginaw River, Saginaw Bay, Lake Huron*.—An appropriation of \$12,000 for these ranges was made by act of Congress approved July 15, 1870. The title to the small portion of marsh required for these lights was so much involved that there was but little hope of its being cleared up in time to save the appropriation from reversion to the Treasury, under the provisions of the act of Congress of July 12, 1870. Moreover, the price (\$2,500) asked for the few acres of swamp, impassable on foot in the summer time, was so much above its real value that application was made to the governor of Michigan for a commission to condemn the property under the State laws. The commission fixed the sum of \$17,196 84 as a fair and just compensation for the site required. This amount being largely in excess of the entire appropriation, as well as greatly beyond its value, the award of the commission was promptly declined by the Board, and on the 30th June, 1871, the appropriation reverted to the Treasury. It is not recommended that any further steps be taken at present.

514. *Thunder Bay Island*.—Under the act appropriating for a Fog-signal at this station, one is now under construction. It consists of a 10-inch whistle, actuated by steam from a horizontal tubular boiler, and will be completed during the present season.

517. *Presqu'isle*, Lake Huron.—This important coast Light, which was under construction at the date of the last annual report, was unexpectedly completed, and was lighted for the first time upon the opening of navigation this season. It is of great benefit to navigation. After the new Light was exhibited the old tower at the entrance to the harbor was dismantled, and the lantern and lens are ready for use elsewhere.

*Spectacle Reef*, Lake Huron.—After the date of the last annual report work upon the embankment of protection was prosecuted at Scammon's Harbor, where a sufficient depot with dockage has been established) until the close of the season, and resumed on the opening of navigation about the 1st of April. It is expected that the entire crib, ninety-two feet square, will be ready to be placed on the reef early in July.

During the winter the coffer-dam was framed at Detroit, and after the opening of navigation it was taken to Scammon's Harbor, in readiness for use as soon as the crib shall have been completed and placed in position.

A contract for the stone required for the Light-house was made, and it was agreed to deliver granite at Scammon's Harbor, beds and builds cut, for the sum of \$1 25 per cubic foot. The contractor utterly failed to furnish the stone, and, owing to the rapid advance of the season, there was not time to again advertise for proposals with any hope of completing the contracts and securing the delivery of a sufficient quantity of stone to bring the work above water before the close of the season.

In this emergency application was made for authority to purchase limestone from Marcelland, Ohio, in sufficient quantity to secure the object. The honorable the Secretary of the Treasury authorized this purchase, and it was accordingly made at a rate of \$1 75 per cubic foot stone, with beds and builds cut, and \$1 50 for stone in the rough.

At the time the proposals were opened under the advertisement these same persons offered to furnish the same stone for \$2 25 per cubic foot, beds and builds cut, or 50 cents per cubic foot higher. While these stones are not as good or durable as granite, it is still believed that they will answer the purpose and endure for ages.

The wreck of the schooner *Nightingale*, reported last year as occupying the site selected for the Light-house, was removed during the month of June.

Every preparation looking to the successful placing of the crib on the reef has been completed. The requisite tugs, among the most powerful on the lakes, have been chartered to tow the crib, as well as barges and scows of capacity sufficient to float 250 cords of stone, all of which will go out with the crib, and it is hoped and expected that, taking advantage of suitable weather, the crib will be placed on the reef and secured within twelve hours after leaving the harbor.

The requisite derricks and shears for handling the stone at the depot have been erected, and two platforms of masonry upon which to fit together the several courses of stone and drill the holes for the iron domes are under construction.

A derrick has also been ordered for use in handling the stone upon the crib and setting them in the tower.

The failure of the contractor for granite involves the loss of the balance (about \$70,000) of the appropriation approved July 15, 1870, for this work, which, under the act of July 12, 1870, reverted to the Treasury on the 30th of June. It will therefore be necessary to reappropriate this amount for the fiscal year 1872-'73.

*Straits of Mackinac.*—The necessity for a Light to mark the passage between Round Island and the Island of Mackinac, known as the North Channel, is as great as ever, and the recommendation contained in the annual reports for the last two years, that the sum of \$12,000 be appropriated for this purpose, is respectfully repeated.

522. *Detour, Lake Huron.*—The proposition contained in the last annual report to substitute a third-order lens for the fourth order then in use at this station, was carried into effect upon the opening of navigation this season, and gives great satisfaction.

*Saint Helena Island, Lake Michigan.*—For reasons given in the annual reports for 1868-'69 and 1870, a Light to mark the anchorage at this island is deemed important. It is again recommended that the sum of \$14,000 be appropriated for this work.

*Passage north of the Beaver Islands, Lake Michigan.*—This passage is now much used, and the navigation through it will rapidly increase, since with certain winds it is possible to sail through it when the south passage is impracticable. Lights to mark it will soon be required, but it is proposed to defer for another year the estimates of their cost.

*Little Traverse, Lake Michigan.*—Attention was directed to the necessity of a Light-house to make this fine harbor of refuge available at all times, by an inquiry from the Senate Committee on Commerce.

By reference to the tracing of the lake survey detail chart of Little Traverse, and the engraved lake survey chart of the northeast end of Lake Michigan, including Big and Little Traverse Bays and the Fox and Manitou Islands, the relation of the harbor of Little Traverse to the navigation of Lake Michigan can be readily seen and appreciated. The harbor itself is excellent in every respect, easy of access, affording good anchorage and a complete shelter from all winds.

A Light-house of the fifth order, together with a Fog-bell of 600 pounds, with Stevens's striking apparatus, will make the harbor available. In



addition to its relation to the general commerce of Lake Michigan, the harbor has some local importance. This is increasing, and, doubtless, will continue to do so.

**530. South Manitou, Lake Michigan.**—The work of improving this station is in progress, though the working party has been temporarily withdrawn for service elsewhere. All the materials are on the ground, and by the 20th July the entire working force will be again at the station, when it is expected the work will go on uninterruptedly until its completion before the close of the season. The improvements will consist of a third-order tower founded on piles, having its focal plane one hundred feet above the surface of the lake, and a covered passage-way connecting the tower and keeper's dwelling. This improvement will be of great value to the commerce between Lake Michigan and the other lakes.

**Frankfort, Lake Michigan.**—As soon as the harbor piers at this place are completed a Pier-light will be required, and is estimated for under the head of "Pier Lights."

**534. Pere Marquette, Lake Michigan.**—Before the close of last season a Light was established on the head of the pier at this place, under an appropriation of \$6,000, approved July 15, 1870. It was also intended to erect a keeper's dwelling on shore, but it having been found impossible to perfect the title before the 30th June, the balance of the appropriation on that day reverted to the Treasury. It is respectfully recommended that the sum of \$4,000 be reappropriated for the purpose in question.

**Little Point Au Sable, Lake Michigan.**—A Lake-coast Light of the third order is much needed at this point, as a simple inspection of the chart of Lake Michigan will show. Last year an appropriation of \$35,000 for this purpose was recommended, but not made, and the recommendation is now respectfully repeated.

**White River, Lake Michigan.**—The appropriation of \$10,000 formerly existing for a Light at this point, reverted to the Treasury June 30, 1870, under the act of July 12, 1870. It is respectfully recommended that this amount be reappropriated for the purpose indicated.

**535. Muskegon, Lake Michigan.**—The rebuilding of the main Light at this station, in progress at the date of the last annual report, was duly completed, and the Light exhibited from the new structure before the close of the season.

**Muskegon Beacon.**—This is to be a Pier-head Light, on the outer end of the south pier, with an elevated walk connecting it with the shore. Its erection is now in progress, and will be completed within a couple of weeks. The exhibition of the Light will be somewhat delayed for want of the required illuminating apparatus.

**537. Grand Haven, Lake Michigan.**—After the completion of the Pier-head Light at Muskegon, the working party will be transferred to Grand Haven for the purpose of erecting a beacon on the pier-head. An elevated walk starting from a point on the pier, which can be safely reached in any weather, will connect the beacon with the shore. The whole will be completed, and the Light shown early in September.

It was intended to move the Fog signal which is located on the pier, but the performance of the machinery is quite satisfactory, and when the larger bell proposed for the station is duly hung, it is supposed it will answer all purposes.

**538. Holland, Lake Michigan.**—A Pier head Light has been established on the outer end of the south harbor pier at this place, and was exhibited before the close of last season. The appropriation under which the work was done was intended to cover the cost of a keeper's dwelling also,

but it was not possible for the owner of the site required to make clear title thereto in time to prevent the balance of the appropriation reverting to the Treasury on the 30th of June last, under the act of July 12, 1870. The sum of \$4,000 should be reappropriated for a keeper's dwelling, and a new effort be made to obtain title.

*South Haven, Lake Michigan.*—An appropriation of \$6,000 is available for a Beacon-light at this place, under which it is proposed to establish a Light during the present season.

*Beacon at Michigan City, Lake Michigan.*—The working party engaged in erecting Pier-head Lights will be transferred from *Grand Haven*, upon the completion of the work at that point, to *Michigan City*, and will complete the proposed beacon and elevated walk at this place before the close of the season.

*Calumet, Lake Michigan.*—After a conference by the Engineer of the district with the president of the Improvement Company, which own the old Light-station at this point, he promised to put the title in proper shape to be submitted for the approval of the Attorney General of the United States, but he has not yet informed him of what progress is being made. As soon as the transfer to the United States is made the work of renovating the old station will be taken in hand, under the appropriation now available, and can be completed in a very short time.

*Grosse Point, Lake Michigan.*—An appropriation for the removal of *Chicago* Light-house to this point is now available, and the title-paper to the land required are in course of preparation. As soon as they have been approved, the work will be taken in hand.

*A Light-house at Racine Point.*—The last annual report contained the following remarks:

This is a prominent point on the west coast of Lake Michigan, about three and a half miles north of Racine, and eighteen miles south of the north-cut beacon at Milwaukee. The point shuts out to the northward the *Racine* Light, which lies in a bay and is not seen by vessels coming from the north, and keeping the shore well aboard as they mostly do, until nearly abreast of it.

Frequent shipwrecks have occurred at this point for the want of a Light. For vessels coming from the south it would also be a good guide for steering clear off Racine Reef.

A Fog-signal should also be provided. For these two objects an estimate of \$40,000 is submitted.

*A Coast-light at Twin River Point, Lake Michigan.*—The following remarks are copied from the report of last year, and are repeated as presenting a fair statement of the necessity for this Light:

This point is seven miles north of *Manitowoc*, and occupies a position on the west coast of Lake Michigan similar to *Grand Point au Sable* on the east. It is the prominent landmark for vessels navigating Lake Michigan, and should be marked by a tower one hundred feet high with an apparatus of the third order. There is an old discontinued station at the village of Twin River, but the site is too far south of the Point to answer the purposes of a coast Light.

An estimate for a proper Light at this station is submitted of \$40,000.

*North Bay, Lake Michigan.*—By act of Congress approved July 12, 1870, an appropriation of \$7,500 was made for the purpose of establishing a Light or Lights to enable vessels to enter this harbor, and a price for the land required was agreed upon. But the owner found it impracticable to clear the title before the 30th of June, when the appropriation reverted to the Treasury. Submitted for reappropriation.

*A Light-house on Poverty Island,* at the entrance to Green Bay.—Attention is respectfully invited to the following remarks, copied from the annual reports for the last two years. The necessity for this Light is daily increasing, the shipments of iron ore from Escanaba alone being sufficient to justify the erection of the Light:

The already large and rapidly-increasing commerce to and from the northern end of

Green Bay and lower lake ports now takes, in daylight, the northern passage from Lake Michigan into Green Bay, because of its being much shorter and more direct. To enable vessels to use the same passage in the night, a Light-house on Poverty Island is necessary.

Estimates submitted of \$18,000.

*A Coast-light between White Fish Point and Grand Island, Lake Superior.*—In the last four annual reports this Light has been recommended. It is more needed than any other Light in the district not already provided for. The sum of \$40,000 will be required to build it, and an estimate submitted.

*A Light-house on Stannard's Rock, Lake Superior.*—The rapid increase of the commerce between Du Luth, the eastern terminus of the Northern Pacific Railroad, and the lower lakes, will demand, at no distant day, the erection of a Light-house on this danger, so much dreaded by all vessels bound to or from points above Keweenaw Point and ports below. The case will be similar to that of Spectacle Reef, and all the costly apparatus and machinery purchased for the latter can be made available for the former, thereby greatly reducing the cost of construction.

It is not proposed, however, to do anything further at this time than to make the preliminary examinations and mature plans for the work, for which purpose an estimate of \$20,000 is submitted.

*L'Anse, Lake Superior.*—The railroad from Escanaba and Marquette to Ontonagon passes the head of L'Anse Bay, and will, for the present, terminate there. Efforts, which will probably prove successful, are now being made to complete the road to L'Anse before the close of this season, when the place will at once become an important point for the shipment of iron ore. A good harbor is found at the head of the bay, and it should be lighted.

To establish such a Light as is needed will require an appropriation of \$12,000, which amount is submitted, with estimate.

*Mendota, Lake Superior.*—This Light-station having been discontinued by the order of the honorable the Secretary of the Treasury, it will be dismantled when visited by the steamer Haze upon her present cruise, and the apparatus, &c., used elsewhere.

*555. Eagle Harbor, Lake Superior.*—Under an appropriation approved July 15, 1870, this station has been entirely rebuilt, and is now in excellent order.

*Outer Island, Lake Superior.*—The through commerce to and from the western end of Lake Superior, increasing so rapidly as the railroads having their termini at Du Luth are extended to the westward, all passes outside of the Apostle Islands, and is greatly in need of a Light-house on the northern end of Outer Island. This should be a Light of the third order, and will cost \$40,000, which sum is respectfully recommended to be appropriated.

*Sand Island, Lake Superior.*—For reasons given in the preceding case, a Light (of a lower order, however) is demanded on the northern end of Sand Island, the most westerly of the group, for which purpose an appropriation of \$18,000 is recommended.

*Du Luth, Lake Superior.*—The act of Congress appropriating for this Light-house provides that it shall be located at the terminus of the Northern Pacific Railway. Consequently, the Chief Engineer of that road was written to, informing him of the provision of the appropriation, and asking him to designate a site for the Light-house; also, in case the proposed site were not the property of the United States, to take the requisite steps to ascertain the owner, and, if practicable, initiate negotiations for the purchase of the site. After some delay, he replied that he

had referred the communication to the president of the road, but no further answer has been received.

*Passage Island.*—The discovery of the silver mines on Lake Superior, and consequent sudden and remarkable increase of travel and traffic to that region, renders it desirable that a Light-house should be built on Passage Island, to mark the channel between it and Isle Royale. The island is difficult of access, and therefore any structure put there will cost more than if erected at some more accessible point.

It is respectfully recommended that an appropriation of \$18,000 be made for the purpose indicated.

*Pier-head Lights.*—These are being erected as fast as illuminating apparatus can be supplied. That at *Muskegon* will be completed early in July, but the apparatus is not yet received. That at *Grand Haven*, as well as the one at *Michigan City*, will be completed before the close of the season, and the others provided for by the act of the 3d of March, 1871, will all be completed before the appropriations for 1871-'72 become available.

As the extension of this system of pier Lights must depend upon that of harbor improvements, it is somewhat difficult to estimate in detail until it is known just where these improvements are to be made. Therefore the estimate for Pier-head Lights is submitted in one amount, and place it at \$20,000, which will be sufficient for this district for the fiscal year.

*Light-house depot at Detroit.*—Work on this has progressed, though not so rapidly as was desired. A bulk-head has been built across the entire front of the lot, and the basin has been dredged out to a uniform depth of ten feet, thus giving sufficient room to accommodate all the Light-house vessels. Enough of the dredged material was deposited behind the bulk-head to fill up the low ground to the height of the bulk-head, thus forming an excellent yard for the storage of buoys and other heavy material.

The depot building, forty by sixty feet in plan, and entirely fire-proof, has been carried up to a sufficient height to admit of the completion of the second floor. The cellar for the storage of the supply of oil forms the basement of the building. It is very desirable to complete this building, so much needed. The dark room in which to test the oils delivered under contract is to be located in the story above that now completed, and the work should go on. Wherever the work is stopped now, a temporary roof must be thrown over it to protect it from the weather, which will add considerably to the cost of the building.

When the building was designed it appeared to be of ample size, but it is now plainly seen that there will be no room to spare. An estimate is submitted:

#### REPAIRS.

Repairs more or less extensive have been made at the following-named stations, and they are now in good order. The repairing parties are in the field, at work, and, before the close of the season, all pressing repairs will have been made.

501. *Windmill Point.*

506. *Fort Gratiot.*

508. *Tarvas.*

509. *Charity Island.*

522. *Detour.*

523. *Waugoshance.*

525. *Beaver Island Harbor.*

- 526. *Beaver Island.*
- 527. *Grand Haven.*
- 530. *Kalamazoo.*
- 533. *Chicago.*
- 545. *Waukegan.*
- 549. *Milwaukee.*
- 550. *Milwaukee, (North Cut beacon.)*
- 551. *Port Washington.*
- 561. *Point Peninsula.*
- 564. *Chamber's Island.*
- 580. *Manitou Island.*
- 581. *Gull Rock.*

#### FOG-SIGNALS.

Four steam Fog-signals (boilers with whistles attached) have been ordered. They are to be established as follows:

1st. Upright tubular boiler, with 10-inch whistle, at *Fort Gratiot Light-station, Lake Huron.*

2d. Horizontal (locomotive) boiler, with 10-inch whistle, at *Thunder Bay Island.*

3d. Upright tubular boiler, with 10-inch whistle, at *Detour Light-station, Lake Huron.*

4th. Horizontal (locomotive) boiler, with 10-inch whistle, at *White Fish Point, Lake Superior.*

Bells, with Stevens's striking apparatus, are to be placed at *Waugance, Granite Island, and Pottawatomie Island.*

#### TENDERS.

The steam-barge *Warrington* has been principally used this season in connection with the work on *Spectacle Reef*. During last winter she was strengthened by arches and additional bilge keelsons, and her deck-beams supported by stanchions, thus preparing her for carrying on her back the heavy stones to be used in building the tower. She has also been fitted with a steam-derrick with which to handle the stone. This derrick has proved of the very greatest service already.

The hard work of the season developed such defects in her boiler that a new one was deemed necessary. Hence, in August last the tender was laid up, and a new boiler eight feet in diameter and eighteen feet long was put in, when the vessel returned to her work. As the new boiler has a larger steam capacity, it will require less coal to run it when towing in heavy weather than was required for the old one, as it will no longer be necessary to force the fires as before.

The schooner *Belle* has been, and will continue to be, used as quarters for the workmen at *Spectacle Reef*. Because of her light draught she can be moored directly on the reef, and she thus answers a purpose which very few vessels would, and indeed is of the greatest value. She is now getting old, and will need extensive repairs before long, but nothing is proposed before the close of the season.

The steam-tender *Haze* has been employed in delivering the light-house supplies on all the lakes, and in transporting freight and looking after the buoys.

#### TWELFTH DISTRICT.

This district embraces all aids to navigation on the Pacific coast of the United States, from the Mexican frontier to the boundary of Oregon.

*Inspector.*—Commodore Alfred Taylor, United States Navy.

*Engineer.*—Brevet Lieutenant Colonel R. S. Williamson, Major of Engineers, United States Army.

There are in this district—

Light-houses.....	1
Buoys actually in position.....	3
Spare buoys, for relief and to supply losses.....	3
Tender (steam) <i>Shubrick</i> .....	1

The following numbers, which precede the names of stations, correspond with those of the "Light-house List of the Atlantic, Gulf, and Pacific Coasts of the United States," issued January 1, 1871.

*Point Fermin*, sea-coast of California, near entrance to San Pedro Harbor.—An appropriation of \$25,000 is recommended to establish a fourth-order Light-house and a steam Fog-signal at this point to mark the approaches of San Pedro Harbor. The appropriation should, if possible, be made so as not to revert to the Treasury at the end of the fiscal year, for the reason that it is impossible to obtain a suitable site except by condemnation under the laws of California, which is a long and tedious process.

The number of vessels navigating near the southern coast of California, between there and San Diego, and passing through the Santa Barbara Channel, has been greatly increased within the last two years. All coast steamers stop at San Pedro, near Wilmington, the port of Los Angeles, and a Light-house and Fog-signal, as guides to the entrance of the harbor, are of great importance.

*Anacapa Island*, west side of southern entrance to the Santa Barbara Channel, California.—An appropriation of \$70,000 is recommended for the establishment of a first-order Light-station at the eastern end of this island. The island is a barren rock about one hundred and fifty feet above the sea, destitute of verdure, and all the water and other materials necessary to prosecute the work will have to be brought from the main land.

The same reasons which make it advisable to establish a light at Point Fermin, are in still greater force with reference to *Anacapa*, which is at the south entrance of the Santa Barbara Channel, there but ten miles in width. A Fog-signal is not recommended on the island, as the coast steamers usually pass nearer the main land, and because of the high and very precipitous sides of the island, against which the waves are constantly dashing and producing a deafening noise.

*Point Hueneme*, sea-coast of California, east side of southern entrance to Santa Barbara Channel.—An appropriation of \$10,000 is recommended for the erection of a first-class steam Fog-signal at this point, which is directly opposite *Anacapa Island*. With a first-order Light on the eastern end of *Anacapa Island*, and a steam Fog-signal on the western extremity of Point Hueneme, the southern approaches to Santa Barbara Channel will be well marked, and the navigation of the waters of that portion of California coast rendered less dangerous.

392. *Point Conception*, sea-coast of California.—An appropriation for establishing a first-class steam Fog-signal at this station was made March 3, 1871. A thorough examination and survey of this point is to be made, with a view to ascertaining the best location for the proposed signal, the supply of water, and of obtaining all other necessary information. The engine and boiler for this signal have been contracted for.

*Piedras Blancas*, sea-coast of California.—This point is about midway between Point Conception and Point Pinos Light-houses, distant one hundred and fifty miles from each other. But Point Pinos is only a harbor Light, and the coasting steamers take their departure from Pie-

dras Blancas, and keep so far out that *Point Pinos Light* is not seen, and it may be considered that there is no sea-coast Light between Point Conception and Pigeon Point, which are nearly two hundred miles distant. An appropriation of \$75,000 is submitted for the erection of a first order Light and Fog-signal at Piedras Blancas.

383. *Point Pinos*, sea-coast of California, entrance to Monterey Bay.—The suit for condemnation of land, and right of way thereto, at this station, which was tried in the October term of the district court of the third judicial district of the State of California, resulted in a verdict by which the jury awarded to the owners of the land the sum of \$1,280 as the value of the land, and the damage resulting by reason of taking of the same. The owners sought to obtain the value of the Light-house building and improvements, and the cost of fencing the Light-house tract and roadway. The former was denied by the court, and the latter disallowed by the jury. The owners have appealed the case to the supreme court of California, and the suit is now pending before that body.

*Pigeon Point*, sea-coast of California.—An appropriation of \$90,000 was made March 3, 1871, for the erection of a first-class Light-house and Fog-signal at this point. The structures are to consist of a masonry tower, which is to be one hundred feet high, from base to focal plane. The elevation of the Light above mean sea-level will be one hundred and fifty-eight feet. The keeper's dwelling is to be a double two-story house, built of wood. Work on the above structures was commenced on the 24th of June. A first-class steam Fog-signal will be established at this point, and also on *Año Nuevo Island*, six miles southeast of *Pigeon Point*. It is expected that the steam Fog-signal at *Pigeon Point* will be ready for operation about the 31st of August. The steam Fog-signal for *Año Nuevo Island* may not be ready for operations until after the first rains of the coming winter, for the reason that it may be necessary to construct a water-shed and build a large cistern to collect water.

384. *Point Bonita*, entrance to San Francisco Harbor, California.—An appropriation for the establishment of a first-class steam Fog-signal at this station was made on the 3d of March last. In June of this year a thorough examination of the point was made, with a view of determining the best location for the signal, the means of supplying it with water, and the best way to get materials to this difficult site selected. A siren with its engine has been constructed for this station, and will be forwarded in a few days.

*Point San Pablo*, between the bays of San Francisco and San Pablo, California. An appropriation was made March 3, 1871, for the erection of a Light-house and Fog-signal at this point, as a guide through the straits of San Pablo. As it was found impossible to obtain a suitable piece of land at this point by purchase, a survey was made of the point, showing the metes and bounds of the land required, and a suit for the condemnation of the land thus surveyed has been commenced in the fifteenth judicial district of California. The court to try this case meets on the 5th of December next. The commencement of work on the proposed structures will therefore be delayed until the opening of next spring. The structures will be completed and the Light-house and Fog-signal in operation before the end of the present fiscal year.

*Mare Island*, entrance to the straits of Carquines, California.—An appropriation of \$10,000 is recommended for the erection of a fifth-order Light at this point, to mark the approaches to Carquines Straits. The erection of a Light-house at this point has been strongly urged for many years.

385. *Point Reyes*, sea-coast of California.—The iron tower for this sta

tion was shipped to Drake's Bay, landed there, and hauled to the top of the bluff, near the keeper's dwelling, on October 9, 1870. The work of taking the tower, lantern, and lens apparatus from the top of the bluff down to the site proposed for the tower was successfully completed shortly afterward, and its erection was commenced by the contractor. The work was completed in November, and the Light was exhibited for the first time on the night of December 1, 1870. On February 1 the work of preparing a site for the steam Fog-signal at this station was commenced. A large cistern was constructed, which, with a basin around it, will hold 100,000 gallons. A water-shed, ten thousand square feet in area, was made, from which water enough will be collected in a year to fill the cistern, even in a season in which the rain-fall will be much below the average.

The water from the cistern is conducted to the Fog-signal by means of a galvanized iron pipe, which is securely fastened to the sides of the cliff. A chute has been built from the site of the tower to the Fog-signal. This chute is constructed in the most substantial manner, and is for the purpose of conveying fuel to the Fog-signal. A winding roadway has been constructed from the cliff to the signal site. Much blasting was done before it was completed. The work of preparing the site for the signal-house, coal-shed, &c., was very slow, difficult, and dangerous. Huge masses of rocks overhanging the signal site had to be blasted off, so that at the rear of the signal is a vertical wall of rock, one hundred feet high. An iron railing was put around the edges of the plot prepared for the signal, to keep any one from rolling off into the sea, as on all seaward sides of the signal the cliff is very steep and jagged.

On June 12 the work of taking the boiler and signal apparatus from the top of the cliff down to its position was successfully accomplished. The boiler was put in position, the apparatus fitted to it, and on June 14 the signal was tried, and found to work satisfactorily. On June 30 the work of housing the boiler and signal-apparatus was completed. The signal is now ready for operation, and can be started as soon as the rains of next winter shall have sufficiently filled the cistern with water. The work of establishing this Fog-signal has been, from the nature of the location, very expensive and dangerous.

400. *Point Arena*, sea-coast of California.—An appropriation for the establishment of a first-class steam Fog-signal at this station was made March 3, 1871. An examination of the point, with a view of determining the location for the signal and the supply of fuel and water, has been made. It is expected to complete the work and have the signal in readiness for operation November 1 next.

401. *Cape Mendocino*, sea-coast of California.—The brick dwelling-house at this station was so badly injured by an earthquake on March 2, that it was deemed necessary to pull it down, and erect in its stead a double house of wood. The place selected for the site of the new dwelling is on the spur of the cape on which the Light-house tower stands, and some distance above it. The spur is a rocky ledge, and has the appearance of being very permanent. The work of tearing down the old structure commenced on the 23d of June; the keepers having removed to a shanty near by that was fitted up as a temporary residence for them. It is expected that the new house will be finished by November next. This structure is of the same plan as the *Cape Blanco* dwelling, which was built last year.

The claimants of the land at this Light-station have appealed from the decision of the judge of the eighth judicial district to the supreme court of the State, and the case is now pending before that body.



**Trinidad Head, sea-coast of California.**—An appropriation for the erection of a Light-house at *Trinidad Head* was approved June 20, 1860, but nothing was done toward building the structures until February of this year. The materials were purchased and the work commenced in June, and the work is now progressing favorably. The Light will be of the fourth order, fixed, varied by red flashes, and will be shown from a low, square, brick tower.

**Fauntleroy Rock, Crescent City Harbor, California.**—An appropriation for erecting a day-beacon on this rock was made March 3, 1871. It is to be of wrought iron, will be thirty feet high from the base of the rock, and is to be surmounted by a circular cage composed of wrought-iron rings. The work was completed on the 20th of September.

At each of the following-named stations there have been repairs and renovations, more or less extensive, made since the date of the last annual report:

391. *Santa Barbara*, coast of California, near Santa Barbara landing.

392. *Point Conception*, coast of California, west side of northern entrance to Santa Barbara Channel.

393. *Point Pinos*, coast of California, south side of entrance to Monterey Harbor.

394. *Santa Cruz*, on Point Santa Cruz, at the entrance of Santa Cruz Harbor, California.

395. *Farralones*, on the largest or southeast Farralon islet.

396. *Point Boneta*, California coast.

397. *Fort Point*, California.

398. *Alcatraz*, on Alcatraz Island, in the harbor of San Francisco, California.

399. *Point Reyes*, California.

The following are the names of the Light-stations in these districts not mentioned elsewhere:

390. *Point Loma*, California, west side of entrance to San Diego Bay.

402. *Humboldt*, California, north side of entrance to Humboldt Bay.

404. *Crescent City*, California, entrance to Crescent City Harbor.

#### THIRTEENTH DISTRICT.

This district embraces all aids to navigation on the Pacific coast of the United States north of the boundary between California and Oregon.

**Inspector.**—Commodore Alfred Taylor, United States Navy.

**Engineer.**—Major H. M. Robert, Corps of Engineers, United States Army.

There are in this district—

Light-houses.....	10
Buoys actually in position.....	10
Spars, buoys for relief, and to supply losses.....	10
Tender steam <i>Shubrick</i> , common to Twelfth and Thirteenth Districts.....	1

The numbers preceding the names of the stations correspond with those of the Light-house List of January, 1871.

407. *Yaquina Bay*, Oregon.—The Light-house at this point was commenced May 1, 1871, and will be completed about September 30, 1871.

408. *Cape Foulweather*, sea-coast of Oregon.—For the erection of a first-class sea-coast Light at or near this point there was appropriated at the last session of Congress \$200,000. It is proposed to erect a brick tower eighty feet from the ground to the focal plane, giving the focal plane a height of about one hundred and fifty feet above the sea level. The plans have been completed; work was commenced about September 1, and will be completed during the present fiscal year.

409. *Cape Disappointment*, mouth of Columbia River, Washington Territory.—A new dwelling for light-keepers has been commenced, and will be completed during the present season.

411. *Cape Flattery*, entrance to Puget Sound, Washington Territory.—A first-class steam Fog-signal has been commenced, and will be completed at this station before December next.

The following are the names of Light-stations in this district not mentioned elsewhere:

405. *Cape Blanco*, sea-coast of Oregon.

406. *Cape Arago*, (*Gregory*,) sea-coast of Oregon.

410. *Shoalwater Bay*, Washington Territory.

412. *Ediz Hook*.

413. *New Dungeness*.

414. *Smith's (or Blunt's) Island*.

415. *Admiralty Head*.

All of which is very respectfully submitted.

W. B. SHUBRICK,

*Rear-Admiral U. S. Navy, Chairman.*

THORNTON A. JENKINS,

*Rear-Admiral, U. S. Navy, Naval Secretary.*

GEORGE H. ELLIOT,

*Major Corps of Engineers, U. S. A., Engineer Secretary.*

Hon. GEORGE S. BOUTWELL,

*Secretary of the Treasury.*

# REPORT

OF

## THE SECRETARY OF WAR.

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**MR. PRESIDENT:** The reorganization of the Army required by the act of July 15, 1870, the provisions of which were alluded to in my last annual report, has been accomplished. The enforcement of that portion relating to a reduction of commissioned officers demanded strict investigation of the records of the military conduct and service of supernumerary officers, and forced upon the Department an unpleasant duty. It is believed, however, that the decisions finally reached were fair, impartial and for the good of the service. In accordance with the same act the number of enlisted men was on July 1 reduced to 30,000; indifferent soldiers were discharged, the standard of recruits was raised with a view to improving the character of the rank and file, and the following table of organization was established:

Enlisted men of engineers.....	301
Enlisted men of ordnance .....	475
Ordnance sergeants at posts.....	200
Military Academy band.....	24
60 enlisted men per company for 55 companies artillery.....	3,300
96 enlisted men per battery for 5 batteries light artillery.....	420
64 enlisted men per company for 120 companies cavalry.....	10,080
60 enlisted men per company for 250 companies infantry.....	15,000
Non-commissioned staff of regiments.....	200
	<u>30,000</u>

The staff of general officers was also reduced to the simple requirements of the Army in time of peace, and the line officers thus relieved from detached duty were ordered to their regiments where they could be of more benefit to the service.

The total expenditures for the fiscal year ending June 30, 1869, were \$40,644,012 76; the expenditures for the year ending June 30, 1870, were \$57,655,675 40, which sum includes \$3,697,500 for river and harbor improvements. The expenditures for the year ending June 30, 1871, were about \$40,000,000, including for river and harbor improvements \$3,915,000. Thus during the year 1869-'70 the reduction in expenses of the War Department amounted to \$22,988,367 36, and during the year 1870-'71 a further reduction of \$15,655,675 40 was made. For the next fiscal year 1871-'72 there is appropriated \$36,530,776, including for river and harbor improvements \$4,407,500.

The total estimate for military appropriations for the fiscal year ending June 30, 1873, is \$32,415,472 85. Of this estimate the sum of \$1,153,607 05 is necessitated by the prohibition of the use of unexpended balances of former years, thus requiring estimates for reappropriation of such sums as have reverted to the Treasury under the fifth section of the act of July 12, 1870. The estimate of the Chief of Engineers for fortifications, improvement of rivers and harbors, public buildings and grounds and Washington Aqueduct, are submitted separately, as presented by that officer, as follows: Fortifications and other works of defense \$3,255,500; for river and harbor improvements \$9,930,200; and for public buildings and grounds and Washington Aqueduct \$446,704.

Up to this date, during the current fiscal year, there has been paid into the Treasury, as realized from the sale of arms and from other sources, during the current fiscal year, \$21,766,403 07.

Under the act of July 27, 1861, providing for the adjustment and payment of the claims of the several States for enrolling, subsisting, and other expenses incurred by them for troops called into the service of the United States, these claims were paid out of any money in the Treasury not otherwise appropriated. The act of July 12, 1870, repeals the appropriation clause of the act of July 27, 1861, and requires the proper Department to submit estimates for these expenses, in the usual manner. I have accordingly submitted an estimate of \$3,000,000 for this purpose, that being the amount designated by the Third Auditor of the Treasury as being required for the settlement of claims now pending in his office for the next fiscal year.

The reports of the General of the Army and of the division and department commanders, herewith submitted, will convince the country that the officers and men of the Army have performed the duties devolving upon them faithfully and well. Though these duties, resulting from the determination of the Government to enforce the laws for the collection of the revenue and for the suppression of armed insurrection, have few agreeable features, they are performed with that cheerful energy which is the result of discipline. The records of the Department show that one hundred applications for troops for various purposes, and for military protection, have been made since January 1, 1871, all of which, where the necessity required it, have been promptly responded to.

It is with great embarrassment and difficulty that the appropriations made at the last session of Congress—reduced as they were below the estimates of the Department—can be so economized as to answer the pressing requirements of the service. The operations of active warfare in Arizona, in connection with Indian difficulties there, are such as necessarily require large expenditures, and the causes which have produced this necessity were not anticipated by Congress when the appropriations were made. The officers in charge of these operations—General

Schofield, commanding the Division of the Pacific, and Colonel Crook, in immediate command of the Department of Arizona—have united with this Department in endeavoring to retain the expenses at the lowest possible limit, and have used the most judicious efforts in this direction, and the conduct of Colonel Crook in his administration of the affairs of his department has received my full approval. While, therefore, the full appropriations asked should be given, continued endeavor will be made to prevent any expenditures beyond those absolutely essential.

I recommend that the *extra* lieutenants now authorized by law to serve as regimental adjutants and quartermasters in the artillery, cavalry, and infantry regiments, as provided by sections 2, 3, and 4 of the act of July 28, 1866, be discontinued as vacancies occur in those grades. This would effect an ultimate reduction of eighty lieutenants; would result in a yearly saving, if the reduction should be completed, of nearly \$160,000, and would be of no detriment to the service.

It is further recommended that the grade of quartermaster-sergeant for the companies of cavalry, infantry, and heavy artillery be abolished. The duties of this non-commissioned officer before the late war were usually discharged by the first sergeant, and the present strength of a company is such that a return to the old system in this respect can well be made.

With regard to the grades of enlisted men known as company artificer and company wagoner, the state of the service is now such as to justify the recommendation that they too be discontinued and their duties devolved upon a smaller number of private soldiers, detailed for extra duty service and employed under direction of the Quartermaster Department. Should this recommendation be adopted, 1,165 enlisted men would be dispensed with, at a gross yearly saving of \$412,740. From this deduct the probable cost of extra-duty men, estimated at two-thirds the number of artificers and wagoners—\$72,240—and the net saving will be over \$340,000.

By the act of March 3, 1863, the first six regiments of cavalry are each allowed one veterinary surgeon at a compensation of \$75 per month. By the act of July 28, 1866, the four other cavalry regiments are provided with the same organization, with the additional allowance of one veterinary surgeon to each, at a compensation of \$100 per month; that is to say, two veterinary surgeons are allowed to each of the latter regiments, one at a salary of \$75 per month and the other at \$100. To remedy this defective organization, I recommend that two veterinary surgeons be authorized for each cavalry regiment, at a compensation of \$100 per month, and that the provisions of the acts above cited be repealed.

In the general regulations of the Army, of 1863, a plan is presented by which soldiers who are frugal enough to save their pay shall have a safe deposit for it. The outline is simply this: Not less than five dollars may be deposited at any one time with the paymaster, at pay-day

when a check-book will be given the soldier in which the amount of deposit will be entered. These deposits cannot be drawn till the discharge of the soldier. They are not subject to forfeiture by sentence of court-martial, but belong to the personal estate of the soldier, voluntarily confided by him to the trust of the United States, until he receives final payment on discharge. The benefits of this plan are various. It prevents the vicious practice of confiding money to commissioned officers for safe keeping, which injures discipline by the invariable disputes engendered, and it avoids the lumbering of the pay-rolls by constant entry of pay not drawn.

By the restriction contained in section 7, act of July 12, 1870, which was interpreted by the Treasury Department to apply to these deposits, it became necessary to issue an order for rescinding this regulation, and to cause all the deposits to be drawn from the Treasury by soldiers holding check-books. The amount was considerable, and it is feared many men were induced to desert by thus coming into possession of unusually large sums during their term of service, instead of receiving them when discharged. It is recommended that provision be made to meet this unexpected application of the legislative restriction that the benefits of the regulation may be restored to the soldier.

The law authorizing the enlistment of men who are eighteen years of age, and by its language "the oath of enlistment taken by the recruit shall be conclusive as to his age."\* The appeals to the Department for the discharge of soldiers are almost numberless. The force of clerks employed upon this branch of office duty is not sufficient to answer the repeated applications for discharge, which fill the Department mails, and the stereotype refusal which must in most cases be given only stimulates the applicant to obtain renewed appeals from persons of influence and character, who willingly apply to the Department, with a request for assistance, without reflecting upon the embarrassment which is given, or upon the cost of a result so easily recommended and so difficult to justify. The enlistment of each recruit and the cost of transportation to his regiment involves an average expense of \$80 in each case. By his discharge this amount is a total loss to the Government.

The greater number of those for whom this costly favor is asked are under the age of 21 years, and in this connection I recommend that the law regarding enlistments be amended, and that no recruit be permitted to enter the service whose age, by his own oath, is not shown to be over 21 years—the oath, as now, to be taken as conclusive.

Experience shows that the age of enlistment for music boys can, with advantage, be reduced, and it is advised that the law be so amended that hereafter enlistments in that class of recruits may be made at the age of twelve years.

It was found impossible to prepare, in time for submission to Congress at its last session, a system of regulations for the administration of the affairs of the Army, as contemplated by the act of July 15, 1870. A

board of competent and experienced officers has been for some months diligently engaged in the compilation of a code of regulations, and the work is rapidly approaching completion.

Desertions during the past few months have largely increased. The reports received at the Department indicate that the reduction of the pay of soldiers from sixteen to thirteen dollars per month has contributed greatly to this result, as far as those men are concerned who enlisted prior to July 1, 1871, the date of reduction.

The board of officers, directed to investigate the subject of military prisons and prison discipline in the British army, visited, last summer, the only military prison now in Canada, viz, the one at Quebec, and through the courtesy of the Inspector, Colonel H. F. Williams, were enabled to witness its practical workings. The board were very favorably impressed with the good results obtained from this system, which has now been fifteen years in operation in the British service, and recommended its adoption in our own. I invite the attention of Congress to this subject, believing it to be of great importance to the efficiency of our Army, which is greatly impaired by the inadequate and imperfect means of punishment now practiced. By having the pay of the convicts forfeited to the prisons, but little, if any, additional means would be required to support them after they were put in operation. The report of the board is full of interest and will hereafter be transmitted to Congress.

The retired list of the Army is now limited to 300. The endeavor has been to equalize the selections for that list from both the higher and lower grades of the officers entitled to be placed upon it, so that it may not be filled to an unreasonable extent by officers of high rank and consequently greater compensation. There have been sixteen deaths of retired officers during the past year.

By the act approved September, 28, 1850, appropriation was made of \$10,000 for purchasing, walling, and ditching a piece of land near the city of Mexico, for a cemetery for such of the officers and soldiers of our Army as fell in battle or died in and around that city during the Mexican war, and for the interment of American citizens who have died there.

In December, 1869, a report was made by the vice-consul of the United States at the city of Mexico, to the effect that, in consequence of neglect and the want of means for repairs, many depredations were being committed, and that the cemetery presented a lamentable appearance of dilapidation. An appeal was made to this Department for funds to the amount of about \$1,150 to be sent to the consul to enable him to restore the cemetery to a condition creditable to the United States Government. The War Department was fortunately able to meet the temporary demand, but could not comply with a further suggestion for the employment of a superintendent at a salary of \$50 per month instead of \$20, the rate heretofore paid and which is deemed insufficient. By the act of July 21, 1872,

there was appropriated \$1,412 34, and by the act of August 31, 1852, \$3,000 for the purchase of the cemetery, under the direction of the President, and these sums were all disbursed by the Department of State. It is recommended that, as the general subject of national cemeteries is now administered by the War Department, a special act be passed placing this cemetery upon the same footing as other cemeteries, with a regularly appointed superintendent, and that a sufficient portion of the appropriations for national cemeteries be made applicable to the repair and preservation of the one in question. The latest report of the condition of the cemetery shows that, with the temporary aid afforded by this Department, its condition was very materially improved. An appropriation of \$1,200 is asked by the United States consul to complete the repairs and to construct an artesian well for irrigation, to preserve the shrubbery and save the annual tax for water.

By the tenth section of the act of July 15, 1870, the Secretary of War was required to investigate into what are known as the Montana Indian war claims of 1867, and to report to Congress the names of the persons entitled to relief, together with a statement of the facts and sums upon which such report may be based. The investigation was confided to an inspector general of the Army, whose report, setting forth the nature and amount of the claims and the amount required for an equitable settlement of them, was submitted to Congress at the last session and commended to favorable consideration.

To complete the investigation, there remained to be submitted a list of the persons entitled to relief and a statement of the award equitably due to each claimant. This list, when nearly finished, was, with most of the papers connected with the case, destroyed in the late fire at Chicago. A greater part of the original vouchers, however, had been returned to their owners after certified copies had been taken, and new copies can consequently be obtained. The claimants have been called upon by advertisement to furnish such copies, or, in default thereof, to file statements of their claims, and in this way the lost evidence will be measurably renewed. With these papers and such data as survived, a new report of awards can be made which will probably prove as reliable as the one destroyed. This report will be laid before Congress without material delay, its early preparation depending wholly upon the promptness with which claimants respond to the invitation to replace their evidence.

Under the joint resolution approved May 7, 1870, authorizing and empowering the Secretary of War to select and set apart for a permanent military post so much of the military reservation of Fort Snelling, not less than 1,000 acres, as the public interests might require for that purpose, and to quiet the title to said reservation, and to settle all claims in relation thereto, and for the use and occupation thereof upon principles of equity, I have selected and set apart for a permanent military post at Fort Snelling 1,521 <sup>20</sup>/<sub>100</sub> acres, embracing the fort and buildings pertaining, and in full settlement and release of all claims in rela-



tion thereto, and for the use and occupation thereof, have conveyed to the purchasers of the property the remainder of the reservation, amounting to 6,394 $\frac{1}{2}$ % acres.

The proceeds of sales of clothing from June 30, 1870, to the present date amount to the sum of \$1,875,728 84, all of which, as collected, is turned into the Treasury and cannot be used by the Department. Some of the purchasers have not been able, on account of the disastrous effects of the Chicago fire to meet their engagements promptly, but the time of payment has been extended. A great amount of old clothing and equipage is unfit for Army use, and hence larger appropriations will become necessary. The cost of transportation for this year has been about \$1,500,000, which is but little less than for the previous year. The reduced Army is compelled to increased activity to compensate for its loss in numbers.

The appropriation for barracks and quarters has not been sufficient to shelter the Army in a manner essential to its comfort and health, and hence it is earnestly desired that the appropriation asked for that purpose may not be reduced.

Of the southern railroads which were allowed to purchase rolling stock and other railroad supplies from the United States, twenty-seven have paid in full, and twenty-four are still in debt to the Department in the sum of \$4,724,350 53.

In the office of the Quartermaster General large numbers of miscellaneous claims for transportation and for stores taken and used by the Army in certain States and Territories, under the act of July 4, 1864, have been filed and final action had as far as possible. These claims amount to many millions of dollars, and the large interests involved require that there should be more care taken of these important records than can be given them in the present building, in which a fire would be disastrous.

The number of graves in national cemeteries is 317,850, including 2,265 added during the year. The cemeteries cover an area, in the aggregate, of about 1,800 acres of land, acquired at a cost of \$170,000.

The attention of Congress is asked to the loss and embarrassment resulting from the condition of the title to sites of military posts in Texas. The law forbids the purchase by the Secretary of War of any lands without special authority from Congress. New posts on the remote and unsettled frontier of that State have generally been located on the public lands belonging to the State, as there are no public lands available owned by the United States in Texas. As soon as this Department begins to erect shelter for the troops, speculators enter these lands, and hence claims arise for rent and timber to an amount far beyond their value. An act authorizing the Department to quiet title to sites already occupied, and to purchase such as may hereafter be required, is necessary to remedy the evil.

The report of the Commissary General of Subsistence shows that the

Army has been well supplied during the past year. I agree with him that according to the varying necessities of troops stationed in the different climates of the country, there should be authorized for issue substitute articles, so that the food of the soldier may be at times varied from the regular ration. Since the last annual report a detailed statement has been furnished the Department of the Interior of the expenses incurred in the fiscal year of 1869-'70 by the Subsistence Department in furnishing supplies for Indians, which shows the amount to have been over \$1,600,000, of which \$1,200,000 has been repaid by transfer at the Treasury. It is desirable that appropriations for the subsistence of Indians, when necessary, be made for the disposition of the Interior Department, as the subsistence fund of this Department, based upon the appropriation actually necessary for the support of the Army, is not large enough to allow any portion to be diverted from its legitimate use without embarrassment to the service.

Owing to the deficiency existing in the clerical force of the Surgeon General's Office, a large number of official demands for information from the records of the office for the settlement of pension and other claims have remained unanswered. Under the act of Congress authorizing the appointment of hospital stewards, that force has been strengthened, and it is hoped that the accumulated work will be rapidly disposed of. There were 206 military posts requiring medical attendance on July 1. 1870. The number of medical officers is insufficient for the service, and I renew the recommendation that the law prohibiting promotions and appointments in that corps be repealed.

Part First of the Medical and Surgical History of the War is near completion, and will be laid before Congress during its coming session, when it is hoped sufficient appropriation will be made to continue the publication of the remaining parts. The report of the Medical Statistics of the Provost Marshal General's Bureau, the compilation of which was authorized by the act of July 28, 1866, is also nearly completed and is in process of being printed at the Government Printing Office. It is expected that the entire report will be printed and ready for distribution during the approaching session.

The Corps of Engineers during the past year has been actively engaged upon the works for the defense of our sea-coasts, on river and harbor improvements, and in surveys and reconnaissances and construction of light-houses. With the appropriations granted for fortifications in our principal harbors, these works along the Northern Atlantic and Pacific coasts have been pushed forward in their modifications as rapidly as the circumstances would permit, and already the batteries are beginning to assume the character needed by the requirements of modern warfare. The modifications referred to look to the strengthening of our works by the introduction of heavy earthen batteries for the largest guns and mortars.

Since the last report the battalion of engineers has been reduced to

354 enlisted men, and constitutes an efficient body of troops, and is carefully instructed and drilled in its duties. The engineer posts and depots of Jefferson Barracks and Yerba Buena Island have been broken up and the troops are now concentrated at Willet's Point and West Point, New York. Besides assisting in the instruction of the cadets of the Military Academy, the battalion of engineers constitutes the school for the trials with torpedoes for the defense of our harbors, and takes charge of the depots for the bridge-trains and equipage and engineer tools for the use of the Army in general. The appropriation asked for torpedoes and other purposes at the engineer depot at Willet's Point and recommended to Congress.

A visit made to Willet's Point in September last gave me an opportunity for inspecting closely the management of the post, and for observing the advantages offered the men in drill and discipline, and in the education necessary for that arm of the service. The result was very gratifying. The thorough mode of instruction and the perfected drill of the battalion deserve commendation.

Satisfactory progress has been made in the prosecution of works for the improvement of rivers and harbors, and of the surveys connected therewith. The annual report of the Chief of Engineers contains a detailed account of the progress and condition of these works, and of the results of the surveys ordered by Congress. This report also contains information concerning the public buildings and grounds and the Washington Aqueduct.

Proper measures have been taken to carry out the joint resolution of February 21, 1871, in relation to the establishment of water-gauges, and making daily observations of the rise and fall of the Lower Mississippi and its chief tributaries.

Under the act of April 4, 1871, for the appointment by the President, of a commission to examine and report on the Sutro tunnel, Lieutenant Colonels H. G. Wright and John G. Foster, of the Corps of Engineers, and Professor Wesley Newcomb, a mining engineer, were thus appointed, and Captain W. R. King, Corps of Engineers, was directed to act as secretary to the commission. The commission has completed the investigations at the tunnel and the mines of the Comstock lode, and is now preparing to report.

In the survey of the lakes, operations were carried on in Lakes Superior, Michigan, St. Clair, and Champlain, and the progress of the work in the field and office has been highly satisfactory. The geological survey along the central route of communication with the Pacific coast has been actively continued, and the publication of the results, already begun, is looked for with much interest.

During the fiscal year small-arms and ordnance stores to the amount of \$10,000,000 have been sold, and the entire proceeds, except a small sum retained to meet expense of preparing other stores for sale, have passed into the Treasury beyond the control of this Department. The

operations at the arsenals have been confined to the manufacture of supplies required by the troops, to the care of stores on hand, and to the manufacture of one or two experimental gun-carriages. It is hoped that Congress will grant the appropriations asked for to carry out the plans for the continuance of the work at the great arsenal of construction for the Mississippi Valley at Rock Island. Several kinds of experimental rifles and carbines, as recommended by the St. Louis board, have been manufactured at Springfield armory for comparative trial in the field. An inspection of that armory, not long since, satisfies me of the necessity for continuing the appropriations for its maintenance and support. The ability of its present administration especially commends this well-appointed armory to the attention of Congress.

Sufficient information will doubtless be derived from the use of the experimental arms in the field, to enable a board to recommend a breech-loading system for adoption. The armament of State troops should be like that of the national forces, who now use breech-loading small arms. The reserve of 10,000 arms of that kind now on hand is not half sufficient to supply the States upon quotas now due.

Attention is called to the recommendation of the Chief of Ordnance concerning the repeal of the act prohibiting promotions and appointments in the Ordnance Corps.

An increase of the annual appropriations under the law of 1808, providing for arming and equipping the militia is urgently required.

The small clerical force allowed the office of the Judge Advocate General of the Army is not sufficient to perform the great amount of labor required to copy, on the demand of persons who have been tried, the voluminous proceedings of the courts-martial in their cases. The duty is an imperative one under the law, but the force is inadequate to its accomplishment, as may easily be seen upon an inspection of the record of the vast amount of work performed in that office. I recommend the continuance of the appropriation by which special copyists could be employed for this purpose.

At Fort Whipple, Virginia, instruction has been given in the meteorological duties and studies required at the signal-stations for observations and reports of storms throughout the United States, and in military signaling and telegraphy to officers of the Army and Navy. During the year the observation and report of storms has been necessary rather in the process of organization for future success than as completely organized. A duty without precedent has had to be originated in all its details of plans and discipline—the observation, reports, and mode of making public the necessary deductions and reports. The progress made has been fully as great as could have been anticipated, and has secured valuable results and gives promise of extended usefulness.

By a comprehensive telegraphic organization each of the signal stations is in telegraphic communication with the Signal Office at Wash-

ington, and from each of them daily and nightly weather reports are received at the Department. These reports are studied, bulletined, and charted at the office of the Chief Signal Officer, and are furnished at the same time to most of the principal cities and ports of the country. The deductions from the study of the reports are instantly telegraphed to the press and bulletined as soon as practicable at the observing offices, in board of trade rooms, merchants' exchanges, and other prominent places, and during the past year there have issued in this manner from the Chief Signal Office and the observing stations fifty thousand charts.

In the month of October the display of cautionary signals, announcing the probable approach of storms, was commenced, for the first time in the United States, at twenty ports upon the lakes and Atlantic and Gulf coasts. These signals are arranged to be displayed at any hour of the day or night, upon the receipt of telegraphic orders from Washington.

While the service has been rapidly organized and pressed to these results, each step has been taken only when the public mind seemed to be educated and prepared for it, and the public necessity demanded it. The average time of the receipt by telegraph of the reports and observations made simultaneously from all the stations throughout the United States has been 45 minutes. The average time elapsing between the moment at which telegrams were sent to the office at Washington from the most distant stations, to that at which the deductions are made, published, and issued to the press, has been 90 minutes.

Of the deductions published from the office, 69 per cent. are, after a careful examination of the statistics, considered to have been fully verified. This percentage, increased by those regarded as partially verified, will make an aggregate of 90 per cent. of average verifications.

It has been the policy of the Department to diffuse, as widely as possible, for the use of co-operating institutions, and for scientific study everywhere, the meteorological information collected at its stations and upon its records. It is believed that the United States now possesses a service more extensive and better organized for these purposes than that of any other country.

The steadiness, regularity, and promptness with which the varied labors incident to a work co-extensive with the United States, and which requires in its details a vigilance reaching through both night and day, have been accomplished, illustrate the advantages gained by placing these duties under military direction. A rigor less than that of military discipline would fail to insure the accuracy and strict obedience to orders which have been necessary.

Under the second section of the act of July 24, 1866, to aid in the construction of telegraph lines, and to secure to the Government the use of the same for postal, military, and other purposes, the Postmaster General has fixed the rates at which telegraphic communications for the Government shall be sent. The plan and method of compensation have

worked well, and are found to be of much economy to the signal service.

The wisdom of Congress in affording facilities for its prosecution is daily exemplified. The labors of this branch of the Department, undertaken with some hesitation as to the result and received at first with doubt in many quarters, have gradually grown into popular favor, and by the really wonderful results accomplished in this new field have commanded the attention and approval of the country. The fact that the reports daily issued find in most cases full confirmation, impresses itself on the minds of the people, and men of all callings, especially those engaged in commerce and agriculture, evince the greatest interest in this important work. Full recognition of its value has been given by the press and by the scientific men of other countries as well as of our own, and the results attained so clearly indicate its importance that I can, without hesitation, rely upon Congress for an appropriation for the prosecution and extension of its duties to the full extent of the estimate submitted.

By law the control of the Military Academy at West Point is devolved upon the Secretary of War. For some years past its immediate management had been intrusted to an officer of the Inspector General's Department, who faithfully discharged his duties. Feeling, however, that, for his better information and that he might more efficiently perform the duties that this responsibility placed upon him, there should be a more direct communication between the Secretary of War and the Academy, the system was changed, and now all reports are made directly to this office.

The present strength of the Corps of Cadets at the Academy is 220. Several instances of improper interference by cadets with their fellows have occurred, but the offenders have been summarily dealt with, and strenuous exertions have been made by the Department to prevent the recurrence of such disorders, and to improve generally the tone of military discipline. Legislation on the subject of the expenses of the Board of Visitors is desirable, as under existing laws for the payment of the board and lodging of the members, doubts arise as to what is properly to be included under the head of board. A per diem allowance would remove this uncertainty, and it is recommended that such an allowance be made in the next appropriation.

By the fire at the cadet barracks last winter, many cadets who were engaged, under the direction of their officers, in extinguishing the flames, suffered the loss of clothing, books, &c., and an appropriation is recommended to compensate them for such losses. The sum necessary for this purpose will not exceed six thousand dollars, and should be confined to compensation for their clothing and books.

The intelligence of the great fire of October in Chicago reached the Department while the flames were in progress, and orders were at once telegraphed to officers in charge of Army depots to forward to that city sup-

plies for the homeless and destitute. The promptness with which the wishes of the Department were carried out, merits high commendation. In a few hours, clothing, blankets, tents, and provisions were on their way to the stricken city, and this immediate action relieved much distress. The records and property in the building occupied for headquarters of the Military Division of the Missouri were totally destroyed, but the greater portion of the most valuable can be duplicated from the War Department. Several companies of troops were ordered to the city by General Sheridan, under whose supervision they assisted in preserving order during the trying days which succeeded the conflagration. The official and personal conduct of General Sheridan, while intrusted, by common consent, with the management of affairs in the city, receives the emphatic approval of this Department.

Similar issues of supplies of various kinds were made to the governor of Wisconsin for the relief of the sufferers in that State, and relief was also afforded to those in Michigan. Without further application, Congress will, without doubt, record its sanction of this action.

A perfect system of financial disbursements is a subject which, from the beginning of the Government, has commanded the attention of all the Departments; and the discovery of the astounding frauds, which have startled the country by their magnitude, has recalled attention anew to the causes which have combined to permit these dishonest actions to go so long undetected. No system of regulations can be devised which will make embezzlement, under all circumstances, impossible. The rogue is always vigilant. Counter-vigilance alone can thwart his schemes. The regulations now governing disbursements appear to be ample for the prevention of fraud. The failure to enforce them makes the path to fraud an easy one. The daring deceptions lately practiced provoke an inquiry as to some mode for the prevention of their recurrence. Relaxed duty, failing vigilance, and excessive confidence suspend all checks on dishonesty, and render regulations a farce. A careful scrutiny, by frequent inspections of the accounts of disbursing officers and of their cash balances, followed up, without loss of time, by a comparison of the result of this searching inspection with the officer's balance at the place of deposit, is clearly the only safe resort. The objection that a sentinel is thereby placed at every disbursing officer's door is not entitled to consideration. Integrity does not object to test. It invites scrutiny. An honest public officer prefers that his discretion should be limited. He accepts responsibility when it comes, but he cheerfully submits to any examination of his public conduct, deeming it no reproach that he is subjected to the operation of an inflexible rule, which the dishonest acts of others have made a necessity. Men of large experience as disbursing officers have told me that they do not remember a single defalcation which might not have been prevented or speedily detected by the exercise of proper vigilance on the part of the

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supervising officer. In this he does not transcend his duty. He only performs it.

Why the necessity of furnishing duplicate statements to different Departments if no comparison is made? When the shock of discovery comes, and a great fraud is made manifest, it is clear that there is neglect somewhere. Is it in the regulations and orders and circulars issued for the prevention of these very frauds? Not at all; but in the disregard of supervising officers of their provisions. The vigilance which these circulars prompt, would, if exercised, furnish a different result. Holding these views as to the necessity for frequent inspections, and recognizing their great advantages, I propose, in this Department, to test their efficacy in the most thorough manner. In assigning inspectors to districts, I shall deem it my duty to hold each one of them responsible for every misdemeanor which occurs in connection with the accounts of any disbursing officer in his district, which due diligence on his part would have prevented, so that he will feel that he has a trust with which he dare not trifle. A plan of inspection can, in my judgment, be established, which will be simple and direct, and I shall endeavor to show by its operation that it is eminently practicable. With detection made morally certain, and with punishment sure and speedy, there can be no safety for fraud.

The proclamation of the President of May 3, 1871, calling attention to the act of Congress entitled "An act to enforce the provisions of the fourteenth amendment to the Constitution of the United States, and for other purposes," approved April 20, 1871, necessitated orders for the enforcement of the same by this Department, and consequently it was directed—

That whenever occasion shall arise, the regular forces of the United States stationed in the vicinity of any locality where offenses described by the aforesaid act, approved April 20, 1871, may be committed, shall, in strict accordance with the provisions of said act, be employed by their commanding officers in assisting the authorized civil authorities of the United States in making arrests of persons accused under the said act; in preventing the rescue of persons arrested for such cause; in breaking up and dispersing bands of disguised marauders and of armed organizations against the peace and quiet or the lawful pursuits of the citizens in any State.

It has been absolutely necessary to retain about one-sixth of the Army in those States of the South, east of the Mississippi, which were engaged in the war of the rebellion. Numerous applications for troops to aid in the enforcement of the laws were received from United States marshals, officers of internal revenue, and State officials; urgent appeals for assistance crowded in from private citizens, and it soon became evident that the security of the people demanded the continued presence of the regular forces. It is a painful fact, which merits serious consideration, that in some portions of the South freedom of opinion is not tolerated, if that opinion is expressed in opposition to the doctrines which originated the late rebellion. Indisputable evidence establishes the fact, which is proven, too, by the experience of numerous sufferers, that an



armed rebellion of regular organization and great strength now exists in parts of those States. The frequent reports by Army officers of perfect reliability, made after mature observation and judgment, conclusively show that the ramifications of this organized body are extensive; that its system is arranged with great care and shrewdness; that its persecutions extend in the dark hours of the night, and in cowardly disguise, to persons of every age, sex, and condition who dare to exercise a freedom of conduct, action, or speech which disagrees with the political doctrines of these marauders. This body of conspirators, constituted for the purpose of crushing out many of the inherent liberties of the defenseless people of those States, defies the law and spurns the authority of the Government, and, so long as it exists, so long will it be necessary to aid the civil authorities with the armed force of the nation in putting down this second rebellion and in bringing its leaders to speedy punishment.

The attention of Congress has been repeatedly called to the necessity of appropriations for the speedy erection of a substantial fire-proof building for the War Department, and I cannot close this report without again alluding to the subject. The rented buildings, scattered all over the city, are remote from the main office and ridiculously unsafe. Many tons of records, to which the public business requires daily reference, are stored in these buildings. Besides their historical interest, these papers are of immense value for the protection of the Government against fraud, comprising all the muster-rolls of the regular and volunteer armies, reports of Army officers, hospital records, accounts of public property, and, in fact, the accumulated records of the Department for seventy years, and are scattered here and there in such buildings as can be secured by rent from private parties, and utterly unsuited to the purposes for which they must be used. Every consideration of public interest urges me to press this matter upon the attention of the people's representatives, in the hope that they will act before a conflagration sweeps from the possession of the nation those records whose value cannot be told in figures.

Reflection on the mode of clerical selection and appointments suggests the hope that a system may be devised by the civil service commission which may extend its beneficial effects to the various Departments of the Government. The experience of those who have watched with interest the workings of this Department teaches that time is lost, money wasted, and business demanding attention delayed by the constant changes which occur under present laws and customs. A judicious reform would soon exhibit the great advantage of an improved system.

WM. W. BELKNAP,  
*Secretary of War.*

## P A P E R S

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### THE REPORT OF THE SECRETARY OF WAR.

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#### REPORT OF THE GENERAL OF THE ARMY.

HEADQUARTERS UNITED STATES ARMY,  
*Washington, November 6, 1871.*

GENERAL: Since my last annual report of November 10, 1870, but few changes have been made in the boundaries of the military departments and divisions, and but few changes have occurred in their commanders.

The Military Division of the East is commanded by Major General Meade, and his two Departments by Brigadier Generals McDowell and Cooke. Recently the State of North Carolina has been detached from this Division, and added to that of the South for obvious reasons.

The Military Division of the South during the past year has embraced the Departments of the South and of Texas. General Halleck commands the Division, and Brigadier General Terry the Department of the South, and Colonel J. J. Reynolds that of Texas. By recent orders, the Department of Texas will soon be transferred to the Division of the Missouri. The rapid progress of the railroads in Texas, and of those leading from Missouri towards Texas, changes the whole problem of supplies; and the use of troops on that frontier will be greatly facilitated by these railroads.

A new Department is created in the Southwest, to embrace Louisiana, Arkansas, and Mississippi, and to supervise the forts along the Gulf of Mexico, which Department will be commanded by Colonel W. H. Emory; headquarters at New Orleans.

The Military Division of the Missouri is still commanded by Lieutenant General Sheridan, and embraces substantially all the frontier between the Mississippi River and the Rocky Mountains. This is divided into three Departments, commanded respectively by Major General Hancock, Brigadier Generals Pope and Augur. By recent orders, the Department of the Platte will be temporarily merged into the Department of the Missouri, which will give to General Pope charge of the defense of the Union Pacific Railroad, with all its branches, and the Territories lying near their routes.

The Military Division of the Pacific, commanded by Major General Schofield, remains substantially unchanged. His Departments are commanded respectively by Brigadier General Canby, Brigadier General Ord, and Colonel Crooke, Colonel Stoneman having been relieved in command of the Department of Arizona during the year by the latter.

I inclose herewith formal annual reports from nearly all these officers, describing in detail the operations of the troops under their commands, and the progress of development made during the past year, all of which are perfectly satisfactory.

By reason of the great fire in Chicago on the 7th and 8th of October,

which destroyed the archives of General Sheridan's office, I am not in receipt of his annual report, nor of those of his department commanders, but I know from other official papers that the affairs committed to their charge have been fully attended to, and I hope to receive and submit their reports before the meeting of Congress.

A review of these annual reports will, I feel assured, satisfy the Secretary of War that in whatever sphere of labor our troops have been employed, whether in maintaining good faith with our neighbors on the north, or on the Mexican border; in repressing Indian incursions and outbreaks; in protecting the well-disposed inhabitants of the South, and on the sparsely settled frontiers of the West; in aiding the revenue officers in the discharge of their unpleasant duties, and in sustaining the United States marshals and courts everywhere, they have displayed a zeal and intelligence worthy their good fame established in the past. As General Halleck recommends, however, it is eminently to be desired that the sphere of action of the Army in these quasi-civil cases should be better defined by statute; but in the absence of such statute, we can only rely upon the intelligence and good sense of the officers specially engaged. Thus far few mistakes, if any, have been made, and the conduct of the troops has met the hearty approval of the courts, the civil officers, and even of the inhabitants against whom they have been compelled to act.

At the date of my last report the aggregate strength of the Army was:

2,488 commissioned officers; 34,870 enlisted men.

By the act of July 15, 1870, it was provided that the number of enlisted men should be reduced to a maximum of 30,000 by or before the 1st of July, 1871.

General Orders No. 23, of the War Department, dated March 16, 1871, prescribed the manner in which this reduction should be accomplished. According to the muster-rolls on file in the Adjutant General's Office, the aggregate number of enlisted men on the 30th day of June, 1871, was 29,250.

The Army is necessarily so scattered to remote and inaccessible points, and casualties are constantly happening by death, desertion, and by the expiration of terms of enlistment, that it is very difficult to ascertain the exact number of men at any one instant of time; but, according to a statement prepared on the 20th of October, 1871, from the latest returns, the Army was composed as follows:

Ten regiments of cavalry, 8,800 enlisted men; five regiments of artillery, 3,205 enlisted men; twenty-five regiments of infantry, 13,742 enlisted men; one battalion of engineers, 314 enlisted men; ordnance department, 444 enlisted men; West Point detachment, 202 enlisted men; signal detachment, 199 enlisted men; hospital stewards, 310 enlisted men; ordnance sergeants, 114 enlisted men; available recruits *en route*, 349 enlisted men; permanent recruiting parties, 904 enlisted men; general-service men at War Department and Department headquarters, 420 enlisted men; total enlisted men, 29,003; commissioned officers, 2,105; retired officers, 295.

It will thus be seen that the numbers of enlisted men and officers are within the limits prescribed by law.

In order to maintain the military establishment within the limits prescribed in the act of July 15, 1870, each company must be kept below its proportionate standard, and the consequence is that many of the companies at distant and inaccessible posts fall below a number fit for efficient military service, and it is simply an impossibility to guard against th

result; and I do hope that Congress will remove the restriction, and give the President the discretionary power to keep the companies up to a standard ranging between sixty and one hundred privates, according to the nature of the service required of the troops. Such a measure would add very much to the efficiency, and would rarely, if ever, carry the aggregate strength of the active Army above the standard of 30,000 men, now fixed by law.

I must again earnestly represent the great necessity that new regulations be provided for the government of the Army. I am aware that a competent board of officers is employed by your orders in the preparation of such a code, and only refer to it on account of its paramount importance, and because daily and hourly I am reminded that the old regulations, now in force, are begetting habits that will be hard to eradicate, and the sooner the old regulations are supplanted the easier will be the task of enforcing new ones. For a like reason, I also repeat my recommendation that some uniform system of tactics be adopted, embracing common principles for handling all the arms of service when brought under a common commander. The whole theory of army movements is based on the fact that one responsible head should control masses of men, and this cannot be done efficiently where one set of tactics is used for infantry, another for cavalry, and still another for artillery. I am convinced from experience that this is perfectly practicable and easy of execution, and care little whose particular system is adopted as a basis, because other changes will occur in the progress of time, and the beginning is all that is asked for, on some intelligent plan likely to result in ultimate good.

I also submit herewith a report from Colonel William F. Barry, 2d Artillery, giving an interesting account of the rise and progress of the Artillery School of Instruction at Fortress Monroe, which has been under his management since its foundation in 1867. By means of this school, without any special cost to the Government, the younger officers of artillery and a due proportion of non-commissioned officers are enabled to fit themselves for that special branch of the military service without in the least interrupting the garrison duty of their respective companies.

With great respect, I am your obedient servant,

W. T. SHERMAN,

*General.*

General W. W. BELKNAP,  
*Secretary of War.*

## REPORT OF THE ADJUTANT GENERAL.

*Report of the recruiting service from October 1, 1870, to October 1, 1871.*

ADJUTANT GENERAL'S OFFICE, Washington, October 23, 1871.

Recruiting for cavalry, artillery, and infantry was actively carried on in the principal northern and western cities, except during a short interval in 1870, when the cavalry rendezvous in some of the western cities were closed.

The superintendency of the general recruiting service at Newport Barracks, Kentucky, has been merged with that at New York City, the depots for recruits remaining at Newport Barracks and Fort Columbus, New York Harbor, as heretofore.

The principal depot and superintendency for the mounted service was transferred in January, 1871, from Carlisle Barracks, Pennsylvania, to Saint Louis Depot, Missouri, a sub-depot being located at the former place until within the past few months. This sub-depot was broken up to avoid useless expense in maintaining it, as it was found the concentration of recruits could be effected as well without it.

On the Pacific coast the recruiting service for organizations in that section is conducted under the supervision of the commanding general, Military Division of the Pacific.

In March, 1871, with a view to reduce the Army to its legal strength of 30,000 men, by the 30th of June, 1871, the standard was raised so as to preclude the enlistment of white recruits, except those between the ages of twenty-one and thirty-five years, and of five feet six inches in height.

The standard of height has since been lowered to five feet five inches, in order to meet the increased demand for recruits to keep the companies full.

All the recruiting officers, except those on the Pacific coast, recruit also for the colored regiments.

E. D. TOWNSEND, *Adjutant General.*

*Statement showing the number of enlistments and re-enlistments in the regular Army from September 20, 1870, to October 1, 1871; compiled from reports forwarded to this office by superintendents of the recruiting service, &c.*

Regiments, &c.	Number enlisted and re-enlisted.	Regiments, &c.	Number enlisted and re-enlisted.	Regiments, &c.	Number enlisted and re-enlisted.
General service .....	8,594	1st Artillery .....	344	13th Infantry .....	74
Mounted service .....	2,371	2d Artillery .....	292	14th Infantry .....	79
Engineer battalion .....	99	3d Artillery .....	93	15th Infantry .....	33
Quartermaster Department .....	297	4th Artillery .....	237	16th Infantry .....	259
Military Academy .....	37	5th Artillery .....	196	17th Infantry .....	27
Artillery School .....	4	1st Infantry .....	246	18th Infantry .....	65
Signal Corps .....	171	2d Infantry .....	137	19th Infantry .....	233
1st Cavalry .....	64	3d Infantry .....	81	20th Infantry .....	74
2d Cavalry .....	157	4th Infantry .....	86	21st Infantry .....	106
3d Cavalry .....	22	5th Infantry .....	118	22d Infantry .....	19
4th Cavalry .....	7	6th Infantry .....	172	23d Infantry .....	145
5th Cavalry .....	23	7th Infantry .....	81	24th Infantry .....	469
6th Cavalry .....	31	8th Infantry .....	123	25th Infantry .....	136
7th Cavalry .....	125	9th Infantry .....	162		
8th Cavalry .....	12	10th Infantry .....	37		
9th Cavalry .....	18	11th Infantry .....	39		
10th Cavalry .....		12th Infantry .....	153		
				Total .....	14,306

*NOTE.*—Of the recruits enlisted for general service, 307 were for colored infantry; and of those for mounted service, 120 were for colored cavalry.

E. D. TOWNSEND, *Adjutant General.*

ADJUTANT GENERAL'S OFFICE, Washington, October 20, 1871.

## REPORT OF THE INSPECTOR GENERAL.

HEADQUARTERS ARMY OF THE UNITED STATES,  
INSPECTOR GENERAL'S OFFICE,  
Washington, D. C., October 17, 1871.

SIR: Since the date of my last annual report the stations and employment of the Inspectors General and of the Assistant Inspectors General have been as follows, viz:

During the year, except when on special duty, I have been in charge of the Inspector General's Office, at the Headquarters of the Army, in the War Department, generally supervising the inspection branch of the service. The work of the office has been of similar character to that set forth in my last annual report. I have also been engaged in special duties, under the instructions of the Secretary of War and the General of the Army, during several months of the year.

Special Order No. 260, War Department, Adjutant General's Office, July 3, 1871, appointed me as president of a board to convene in New

York City on the 15th of July, for the purpose of preparing "a system of regulations for the administration of the affairs of the Army," under the special instructions of the Secretary of War. From the time of the assembling of this board until now I have been occupied with the duties specified in the above-mentioned order.

Inspector General D. B. Sacket has continued on duty during the year at the headquarters Military Division of the Atlantic, and in that period has made thorough and careful inspections of nearly all the garisoned posts throughout the division. Many of them have been inspected twice during the year. The headquarters and staff departments have been inspected with careful attention. Inspector General Sacket has also been occupied in other important duties during the year.

Inspector General Edmund Schriver continued on duty in the War Department as staff officer near the Secretary of War, and as inspector of the Military Academy at West Point, until the 15th April, 1871, when he was relieved by Special Order No. 139, War Department, Adjutant General's Office, current series. He has remained on duty in Washington City under the special instructions of the Secretary of War, having charge of the Inspector General's Office in the absence of Inspector General Marcy, and performing such other services as directed by Special Orders from the Adjutant General's Office and the verbal orders of the Secretary of War.

Inspector General James A. Hardie has continued on duty during the year at the headquarters Military Division of the Missouri, engaged in the ordinary duties of the inspection service at that station. He has also been occupied in the following important duties:

1. In the investigation of the Montana Indian War claims of 1867, under the instructions of the Secretary of War, pursuant to the requirements of the act of Congress approved July 15, 1870.

2. In investigating the Kansas Price Raid claims, as commissioner appointed under an act of Congress approved February 2, 1871.

3. As commissioner under an act of Congress approved February 9, 1871, to fix the value of a portion of the military reservation at Fort Leavenworth.

Inspector General Hardie is now engaged in completing his report on the Montana claims, to be submitted on the assembling of Congress.

Assistant Inspector General Nelson H. Davis continued on duty under the orders of the commander of the Department of the Missouri, engaged in the usual duties of the inspection service, until December 25, 1870, when, under Special Order No. 349, War Department, Adjutant General's Office, December 8, 1870, he availed himself of four months' leave of absence on surgeon's certificate of disability, with permission to go beyond sea. This leave was afterwards extended three months. Assistant Inspector General Davis returned to his station on July 17, 1871, since which time he has been occupied on special duty in New Mexico, and on other important duties under the orders of the department commander.

Assistant Inspector General Roger Jones has continued during the year on duty at the headquarters Military Division of the Pacific, and has been actively engaged in making thorough inspections of the various posts and troops in the departments of California and Arizona. He has also carefully inspected all the offices of the several staff departments in San Francisco. Besides this, during the year, numerous important matters have been referred to him by the division commander for investigation and report.

Assistant Inspector General Absalom Baird was relieved from duty in the Department of Dakota and assigned to duty at the headquarters Military Division of the South by Special Order No. 284, Headquarters of the Army, Adjutant General's Office, October 24, 1870. Before reporting at his new station, Major Baird made some important inspections of the posts on the Missouri River, including the Whetstone, Crow Creek, and Lower Brulé Indian agencies. Since reporting at the headquarters Military Division of the South, Major Baird has been employed in making general and special inspections of the posts and troops in the division, and in investigating matters in the staff departments, under the orders of the division commander.

Assistant Inspector General E. H. Ludington has continued on duty at the headquarters Department of the Columbia during the year. The posts in this department are so widely scattered, and the routes of communication so difficult, that it is impracticable for the inspector to visit each post oftener than once in a year. Major Ludington's reports show him to have made one thorough inspection of each post throughout the department except one. He has also performed other important duties, making confidential inspections and serving upon general courts-martial, under the orders of the department commander.

The number of regular inspectors having been insufficient to meet the requirements of the inspection service, three lieutenant colonels, five majors, four captains, and one lieutenant have, from time to time during the year, been detailed to act as assistant inspectors general.

The reports of the inspections made during the past year exhibit a continued improvement in the instruction, discipline, and moral tone of the Army. The unusually large number of desertions that have taken place within the past few months are generally attributed to the reduction of the pay of the soldier under the act of July 15, 1870.

Although this reduction resulted from the limitation specified in the act of April 6, 1869, yet there are doubtless many men who enlisted prior to the time the reduction went into effect who were under the impression at the time of enlisting that they were to receive \$16 per month during the entire term of their service, and they now profess to regard the reduction of pay as a violation of contract on the part of the Government, which, as I am informed, they plead in extenuation of their desertion.

Whether the representations of recruiting parties afforded any reasonable grounds for such erroneous conclusions, I am unable to say, but should Congress by enactment extend the provision of the larger allowance of pay during their periods of enlistment to those soldiers who entered service prior to July 1, 1871, this would remove all cause of complaint so far as relates to the good faith of the Government, and I have no doubt it would in the end prove to be a measure of economy.

R. B. MARCY,

*Inspector General, United States Army.*

Brigadier General E. D. TOWNSEND,

*Adjutant General, United States Army.*

## REPORT OF THE JUDGE ADVOCATE GENERAL.

WAR DEPARTMENT,

*Bureau of Military Justice, October 1, 1871.*

SIR: In compliance with your direction, communicated through the Adjutant General by circular of the 9th ultimo, I have the honor

submit the following report of the business of this Bureau during the past twelve months, or since my last official report :

1. Number of records of military courts received, revised, and registered, 12,194.

2. Number of special reports made in regard to court-martial proceedings, upon application for the remission of sentences, upon claims against the War Department, and upon the miscellaneous questions of law referred for the opinion of the Bureau, 915.

3. Abstracts of proceedings of trials furnished to the proper officials of the War and Treasury Departments, 1,400.

The additional work, heretofore imposed upon the Bureau, of arranging, indexing, &c., the official papers of the late Colonel L. C. Turner, judge advocate, has been completed within the past year. That of similarly arranging the almost equally numerous files of the late Provost Marshal Baker is still in progress.

Owing to the failure of Congress to make the appropriation formerly customary for the expenses of copying records of trials, the business of the Bureau has been frequently retarded and embarrassed by the necessity of imposing this extra labor upon the small clerical force at the office. Persons who have been tried by general court-martial are entitled by statute (the ninetieth article of war) to copies of the proceedings, often very voluminous, in their cases. To have these copies prepared is imperative upon the Bureau; but its other public business cannot be carried on with the proper dispatch while their preparation is imposed upon its small number of clerks. It is therefore urged upon the Honorable Secretary that he will recommend to Congress the continuance of the appropriation by means of which special copyists were heretofore paid for the necessary work referred to.

Respectfully submitted.

J. HOLT,  
*Judge Advocate General.*

THE SECRETARY OF WAR.

## REPORT OF THE QUARTERMASTER GENERAL

### QUARTERMASTER GENERAL'S OFFICE,

*Washington, D. C., October 19, 1871.*

SIR: I have the honor to submit the annual report of operations of the Quartermaster's Department during the fiscal year ending June 30, 1871.

On July 1, 1870, the balance of appropriations to the credit of the Quartermaster's Department in the Treasury undrawn, was, by report of last year .....	\$1,282,473 22
And it was estimated that there remained in hands of disbursing officers or in public depositories subject to their drafts, about \$1,500,000, to be applied to paying off the accounts and vouchers for liabilities properly incurred, and to completing contracts properly entered into during the year.	
Amount deposited to credit of appropriation for the Quartermaster's Department, derived principally from sales during the year of public property purchased with appropriations of former years .....	1,078,065 63
Sums expended by this Department on account of other departments, and by them refunded .....	349,711 66
Total .....	2,710,250 51



Requisitions drawn by Quartermaster General's Office on account of settlements made by the accounting officers of the Treasury of claims and accounts.....	\$1,812,234 24
Balance in Treasury undrawn July 1, 1871, on account of appropriations for the Quartermaster's Department, for years prior to July 1, 1870..	898,016 27
Appropriations for fiscal year ending June 30, 1871, appropriated by act of 15th July, 1870.....	\$11,400,000 00
Appropriated for deficiencies, act of 3d March, 1871....	1,050,000, 00
Amount refunded during the fiscal year on account of overpayments.....	25 00
	<u>\$12,450,025 00</u>
Remittances to officers for disbursement on requests of the Quartermaster General.....	\$12,072,891 22
Requisitions by the Secretary of War on requests of the Pay Department.....	155,000 00
Requisitions on account of settlements made by the accounting officers of the Treasury on claims and accounts allowed by them.....	222,133 78
	<u>12,450,025 00</u>

The remittances on account of the appropriations for the fiscal year have been made upon estimates from the disbursing quartermasters, approved by their commanding officers, and have been distributed among the divisions, departments, and general depots as follows:

To the Military Division of the Atlantic:	
Estimate chief quartermaster, headquarters .....	\$4,786 28
Department of the East .....	378,358 40
Department of the Lakes .....	84,317 62
Total Division of the Atlantic.....	<u>\$467,462 30</u>
To the Military Division of the South:	
Estimate chief quartermaster, headquarters .....	99,533 03
Department of the South.....	627,199 73
Department of Texas.....	1,869,129 76
Depot of New Orleans.....	243,075 91
Total Division of the South.....	<u>2,838,937 43</u>
To the Military Division of the Missouri:	
Department of the Missouri.....	1,420,625 28
Department of Dakota .....	1,044,489 97
Department of the Platte.....	1,004,340 22
District of New Mexico.....	614,336 50
Depot of St. Louis.....	445,912 51
Depot of Chicago .....	307,956 91
Total Division of the Missouri .....	<u>4,837,661 49</u>
To the Military Division of the Pacific.....	<u>2,403,009 62</u>
To the principal depots:	
New York .....	434,481 43
Philadelphia.....	245,346 73
Washington .....	871,966 00
Jeffersonville.....	138,626 04
Total to principal depots .....	<u>1,450,479 19</u>
West Point, New York.....	73,617 00
Springfield Armory.....	3,244 04
Columbus Arsenal.....	1,327 20
Indianapolis Arsenal.....	974 13
Watertown Arsenal .....	5,352 55
Alleghany Arsenal.....	1,640 00
Watervliet Arsenal.....	3,676 24
Frankford Arsenal .....	440 00
Total to independent posts.....	<u>99,341 29</u>

Drawn on requisition of the Paymaster General.....	\$155,000 00
Amount of Treasury settlements.....	222,133 76
Total amount remitted .....	<u>12,450,025 00</u>

At the close of the fiscal year some money remained in hands of disbursing officers and in depositories, subject to their drafts, for payment of accounts and liabilities properly incurred during the year, but accounts for which had not been settled and paid on the last day of the fiscal year.

Whatever balance remains upon settlement of the accounts will be deposited in the Treasury to the credit of the appropriations of the Quartermaster's Department.

The accounts and vouchers which have passed the administrative examination of this office and been transmitted to the Treasury for final examination and settlement, since the last annual report, show disbursements—

From appropriations of years prior to the fiscal year ending June 30, 1871, amounting to.....	\$34,038,936 89
In the fiscal year ending June 30, 1871 .....	612,940 36
Total.....	<u>34,651,877 25</u>

Appropriations are charged with these disbursements as follows :

1st. Appropriations for the Quartermaster's Department, viz:

Regular supplies .....	\$9,923,633 18
Incidental expenses .....	3,559,573 00
Purchase of cavalry and artillery horses.....	939,567 08
Barracks and quarters.....	5,878,130 04
Transportation of the Army.....	12,129,849 19
Mileage, transportation of officers and baggage .....	542,276 58
Material for and amount expended in the purchase and preparation of clothing, camp and garrison equipage..	323,732 73
Purchase of stoves.....	202,605 57
National cemeteries .....	1,033,428 05
	<u>\$34,532,796 47</u>

2d. Special appropriations and expenditures for other departments, viz:

Medical Department .....	4,779 50
Ordnance Department .....	80 24
Subsistence Department .....	106 28
Pay Department .....	255 98
Bureau of Indian Affairs.....	35,194 59
Bureau Refugees, Freedmen and Abandoned Lands .....	36,138 77
Army contingencies .....	11,510 79
Military telegraphs.....	7,559 22
Transportation, &c., of prisoners of war .....	6 35
Reconstruction service.....	8,833 62
Care, &c., sick and disabled soldiers.....	94 64
Collecting, drilling, and organizing volunteers.....	1,243 60
Twenty per cent. additional compensation.....	217 80
Hospital-tax fund .....	13,000 40
	<u>119,061 78</u>

Total disbursements exhibited by the accounts examined during the past year .....	<u>34,651,877 25</u>
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The accounts examined since the last annual report, from which the above statement is made, number 6,401. The number examined in the previous year, as shown by the last annual report, was 1,754, covering disbursements to the amount of \$11,132,157 02.

Of the unexamined accounts, numbering 5,055; 26 relate to disbursements in the year 1868; 435 in the year 1869; 2,637 in the year 1870; and 1,957 in the year 1871. The number of property returns examined during the year is 16,419, embracing vouchers to the number of about 195,000. The number examined in the preceding year was 7,475. The number remaining in the files of the office, unexamined at this date, is 7,815, of which 146 pertain to the year 1868; 1,674 to the year 1869; 4,091 to the year 1870; and 1,904 to the year 1871.

The unexamined accounts for 1868 and 1869 are those of regular disbursing officers of the Department, all accounts of acting assistant quartermasters for the period having been disposed of. These are now under examination, and will be forwarded to the Treasury as soon as possible.

All accounts subsequent to February, 1869, have received a preliminary examination; and as the officers have been advised of all obvious errors, and been allowed ample opportunity to correct them, much correspondence will be avoided in future, and the work of settlement will be materially facilitated. The accounts of all officers who left the service under act of Congress approved July 15, 1870, reorganizing the Army, have been adjusted in this office.

In addition to this, 95 settlements have been made under act of Congress approved June 23, 1870, authorizing the settlement of accounts suspended on account of loss of funds, vouchers, &c., originating since the commencement of the late war, and prior to August, 1866. The amount covered by these settlements is \$43,814 21. The whole number of final settlements made during the year is 479.

The examination of accounts and returns has been very much in arrears for many years, the small clerical force available for that purpose being entirely inadequate for the work; but the amount accomplished during the past year seems to indicate that in one year from this date the work will be practically up to date.

Fifty-one clerks are employed in this branch of the office: one of class four; four of class three; seven of class two, and thirty-nine of class one. It will be seen that nearly four-fifths of the entire number are in the lowest grade, and that in the ordinary course of events a meritorious clerk may remain in the faithful discharge of highly responsible duties for years without promotion. As an inevitable consequence of this, the office loses the service of many of the most valuable clerks of the lower grades, who leave the service entirely, or seek positions in offices which afford better chances for recognition and advancement. I have the honor to suggest that the efficiency of this important branch of the office would be greatly increased by a readjustment of the grades in such a manner as to make promotion possible as the reward of faithful service.

To effect a better organization of the branch, I recommend that an addition of two clerks of class four, two clerks of class three, and four clerks of class two be made, and that a corresponding decrease be made in the number now in class one.

The Quartermaster's Department is charged with the duty of providing means of transportation by land and water for all troops and for all the material of war. It furnishes the horses for artillery and cavalry, and the horses and mules for the wagon trains. It provides and distributes clothing, tents, camp and garrison equipage, forage, lumber, and all materials for camps, and for shelter of the troops and stores. It builds barracks, hospitals, and store-houses; provides wagons and ambulances, harness, except for cavalry and artillery horses; builds or charters

ships and steamers, docks and wharves; constructs and repairs roads, railways, and their bridges; clothes the Army, and is charged generally with the payment of all expenses of the movements and operations of the Army not expressly assigned by law and regulation to any other department. Arms, ammunition, medical and hospital stores, and subsistence stores are purchased and issued by other departments, but the Quartermaster's Department transports them all to the place of issue in camp, garrison, or in the field, and on the field of battle. These duties have been efficiently performed during the year.

The corps of quartermasters is not large enough to afford officers for the smaller military posts. The nature of our military service requires a great number of military posts, garrisoned each by a few companies, and the work of the Department at these posts is generally done by lieutenants of the line, detailed as acting assistant quartermasters.

Their work is responsible and onerous. They incur responsibility for large quantities of property, and sometimes a heavy money responsibility, occasionally involving them in severe losses. For this duty they receive no special compensation beyond the pay of their lineal rank. Under these circumstances the duty is not desirable, and it is avoided rather than sought. The number of line officers who, during the fiscal year, have been on duty as acting assistant quartermasters, is reported at 433. Through their hands large amounts of public money pass. They are charged with operations in the erection of quarters, barracks, and store-houses, involving very heavy expenditures. They have charge of the stables and of the public animals, on whose condition depend the success of military operations, and that regularity of supply and transportation which is essential to the comfort, health, and efficiency of the troops. So important a duty should be sought, not imposed, and the allowance of some moderate sum to cover the responsibility, and compensate the officer for the losses to which he is exposed, such as is allowed to acting assistant commissaries, is very desirable. The difference in the cost of all military structures, and in the length of service and condition of animals, wagons, and all materials of transportation, which would be made by the selection of the most intelligent and efficient business men among the lieutenants of the line for the duty of acting assistant quartermasters, would amply repay the small amount required to pay this allowance.

The average number of line officers on duty as acting assistant quartermasters during the past fiscal year was 150; the total number who so acted, 433, showing that they are frequently changed. The amount of an allowance of \$100 per year to each would be \$15,000. The amount to be saved by making the service desirable, one to be sought by intelligent officers desirous of remaining on duty instead of being relieved from it, is many thousand dollars per annum.

The officers of the establishment are stationed at the principal purchasing and distributing centers as purchasing and disbursing officers. They are not as numerous as economy requires, and four have resigned and one has died since my last annual report was rendered, whose places, under the laws as they now stand, it is not possible to fill.

The interests of the military service require the removal of the restriction upon appointments to the Quartermaster's Department, and the Treasury would be benefited still more than the Army by its repeal.

This office still remains in the building on Fifteenth street, constructed for a hotel, and not fire-proof, and not a fit or safe depository for its records. It is too distant from the War Department for convenient dispatch of business, and it is very desirable that shelter, fire-proof

and safe, should be provided for it at the earliest date. The extension of Winder's building, as the speediest mode of making such provision, was recommended last year, but no action was taken. An appropriation has been made, however, for the erection of a building for the State Department, which, when extended to the north, will furnish space for the Navy and War Departments. A great misfortune, liable at any moment to occur, may be perhaps now best guarded against by early provision by law for the speediest completion of the whole building by all those appliances which, in the present high condition of the engineering and constructive arts, enable architects and engineers to complete in a few months what was formerly the labor of years.

The whole of these buildings could, I doubt not, were Congress so to enact, be pressed to completion within less than two years from the time a sufficient appropriation is granted.

The power to employ a considerable number of clerks temporarily would enable this office to bring up to date the examination of accounts still in arrears, and thenceforward to make such daily current examination of accounts as received as would enable it to detect any considerable error immediately. I have repeatedly made this recommendation without success, and the danger of loss still remains.

Every operation of the officers of the Department, from the purchase of an ocean steamer to the issue and consumption of a horse-shoe in Arizona, is necessarily the subject of record, which, in the course of time, reaches this Department, and is filed here or in the Treasury.

Every operation of purchase, of supply, of use, creates rights and interests which may, at some future time, be the subject of reclamation and discussion. The system in use is simple and thorough. Whenever, after years, a question is raised, the information is found upon the records, but the handling and examination of these records as they arrive, to detect errors and omissions, and their proper index, arrangement, filing, and preservation so as to be of convenient access after months and years have elapsed, require a considerable number of experienced and intelligent clerks.

#### PUBLIC ANIMALS.

No appropriation was made for mounts and remounts of the cavalry and artillery by the Army appropriation bill of July 15, 1870, and the balances of former appropriations, which had, till that time, been available for the service of the ensuing fiscal year, being withdrawn by the law of July 12, 1870, there were no means during the early part of the year to purchase horses. The deficiency bill of March 3, 1871, appropriated \$200,000 for this purpose, but this was not sufficient to remount many dismounted cavalymen, and the force lost, in some degree, its efficiency for want of horses; and though efforts were made to supply these wants as soon as the deficiency appropriation was made, the close of the fiscal year 1870-71 still left the cavalry insufficiently mounted for want of funds for purchase.

There were purchased during the year 1,763 cavalry horses, at a cost of \$166,689 24. The average price was: in Texas, \$69 36; in Department of Columbia, \$75; in Department of the Platte, \$135 13; of Missouri, \$142 50; of California, \$162 49.

One thousand two hundred and thirty-five horses were sold during the year for \$63,350 13, and, under orders of the Secretary of War, 11th May, 1870, to reduce the whole number of train animals, with the reduction of the Army itself, to 10,500,

There were sold, 4,532 mules for.....	\$362,319 95
23 oxen for.....	6-0 45
<u>4,555 beasts for .....</u>	<u>363,019 74</u>

The proceeds of all these sales have been deposited in the Treasury to the credit of the proper appropriations.

The losses during the year reported were: Died, 530 horses, 565 mules, and 10 oxen; lost, abandoned, or stolen, 1,185 horses, 569 mules. The 1,235 horses sold, being nearly all cavalry horses, represent the number which, being disabled or worn out, could be disposed of by sale. There remained in service on the 30th June, 1871, 7,996 horses, 9,756 mules, and 124 oxen.

#### FORAGE AND STRAW.

Over 250 contracts for forage have been made during the year, some of them for indefinite quantities to be delivered as needed where the consumption is small or irregular, others for definite quantities as follows:

Two hundred and fifty-one thousand eight hundred and ninety-six bushels of corn, 266,734 bushels of oats, and 41,413 tons of hay, and 2,392 tons of straw. But this does not represent the full consumption of the Army of any one of these articles.

The issues of forage and straw during the fiscal year have been as follows: Corn, 770,660 bushels; oats, 1,059,601 bushels; barley, 175,113 bushels; hay, 51,165 tons; straw, 3,962 tons.

#### FUEL.

Contracts are reported for 42,355 tons of coal, and 93,150 cords of wood, and 20,399 bushels of charcoal.

The issues of fuel during the fiscal year have been as follows: Wood, 124,372 cords; anthracite coal, 19,492 tons; bituminous coal, 9,186 tons.

Fire-extinguishers have been supplied to a number of military posts during the year. Fires at Fort Hays, Kansas, Fort D. A. Russell, Wyoming, Fort Ripley, Minnesota, and at San Antonio Depot, Texas, have been extinguished by their aid, and much valuable property has been thus saved from destruction. At a fire at Fort Buford, on the Upper Missouri River, which occurred in January, 1871, the thermometer was at 14° below zero, and the fire extinguishers were frozen. The fire was ultimately extinguished by water from the Missouri river.

#### HORSE-SHOEING.

A report entitled "Hints on Horse-shoeing" has been prepared by Mr. John Kiernan, an Army farrier, skilful in the Dunbar method, which was taught to the farriers of the Army under requirements of the joint resolution No. 105, of July 28, 1866, Statutes at Large, vol. 14, page 613. Having been submitted to this office, it was laid before a board of officers assembled by order of the Secretary of War at Fort Riley, Kansas, in January last. The board reported favorably, and recommended the publication of the report in order to continue the instruction and preserve the knowledge of this system, which has been found valuable in the Army. It is in the hands of the Public Printer.

#### CONTRACTS.

Five hundred and eighty-seven contracts were examined and filed in this office during the fiscal year: 253 for forage and straw; 165 for fuel,

of which 12 also included some supply of forage; 20 for building materials; 16 for building and repairs; 35 for transportation; 8 for cavalry horses; 25 for national cemeteries; 43 leases; 4 for clothing, camp and garrison equipage. The remainder for services, stationery, charters, &c.

#### CLOTHING, CAMP AND GARRISON EQUIPAGE.

The clothing in store has been overhauled with a view to its preservation and the condemnation and sale of such as has suffered from the ravages of moths, mildew, and decay. Much of the clothing, though packed in tight bales and boxes, lined with petroleum paper, has been exposed since its manufacture, either by being sent to the field and there opened for issue, or by injury to the boxes or wrappings, and the loss by the moth consequent upon such exposure has been large.

A general inspection has resulted in condemnation and order for sale of large quantities at Jeffersonville, the western, and at Schuylkill Arsenal, the eastern depot.

Unless the fire which has destroyed the business portion of Chicago while this report is in preparation so cripples the purchasers at the sale of September 13, at Jeffersonville, as to prevent their taking the goods purchased by them, that sale will realize to the United States about \$1,270,000.

A sale at Schuylkill Arsenal, in September, produced \$226,000.

During the fiscal year ending June 30, 1871, sales at Philadelphia, Jeffersonville, New Orleans, San Antonio, and smaller sales at other posts, realized the sum of \$379,728 84.

The total public sales of military clothing and equipage of this Department since June 30, 1870, have, therefore, amounted to \$1,875,728 84.

The expenses of purchase and manufacture, repacking, and assorting the clothing and equipage in store during the fiscal year amounted to \$31,143 12.

As the general appropriation bill for the fiscal year forbade the use of balances of former appropriations and of proceeds of sales of materials, some embarrassment was experienced in clothing the Army, owing to the exhaustion of the supply in depot of some articles of equipment, particularly the garments of larger sizes. The only recourse left was to issue with such clothing, smaller than called for, cloth to be used in enlarging the garments by the company tailors. This necessity ceased upon the passage of the deficiency bill, which contained an appropriation of \$200,000 for clothing and equipage during the latter part of the fiscal year.

The stock of clothing and equipage is still very large in some items, but others are exhausted, and larger appropriations will be hereafter needed to purchase and manufacture what is needed.

The deterioration of the knapsacks by some chemical change in the black paint applied to them has rendered the whole stock remaining from the war unfit for use, and they have been condemned and sale ordered. A new supply is being prepared, and two thousand hair-seal skins from Alaska have been purchased, to be used in covering knapsacks, after a model submitted by Major J. C. Tidball, Second Artillery. These are being manufactured in San Francisco. Two thousand leather and canvas knapsacks, of a pattern selected by the General of the Army from various models submitted to the Quartermaster General's Department, have been manufactured by contract in Philadelphia.

The British war department has lately adopted an entirely new style of equipment, devised by a committee of officers of rank in the line and

in the medical department, after several years' investigation and of experiment in use by the troops, known as the valise equipment. A description of these has been obtained, and models are being made at the Schuylkill Arsenal for submission to the War Department.

The experiments of the British army have been apparently thorough, and it is possible that it may be found that this equipment should be adopted for our troops. Until this is decided, the further manufacture of knapsacks is suspended.

A knapsack is a great burden to a soldier, and none has been devised which can be worn by all soldiers with ease and comfort. The best must be but a choice of evils. But as it is now necessary to provide knapsacks for the whole Army, the opportunity will be taken to thoroughly study all devices, and to endeavor to adopt the best.

Haversacks suffered from the same chemical change as the knapsacks. The new supply is being made of enameled cloth.

Complaints of boots and shoes made in the Department of Arizona led to the return of several samples to this office for examination, and the strength of the leather and of the sewed seams was carefully tried in a testing machine and but little difference was found from those now being made of new leather and thread. In some samples the old material showed the greater strength.

I am of opinion that complaints of want of durability of shoes and boots, coming generally from certain very rocky and stony districts, are due generally to neglect to guard the soles with iron nails, a precaution taken by every Alpine tourist before he ventures among the rocks. Attention of officers has lately been specially called to this subject.

It has been necessary to purchase some boots and shoes of smaller sizes, for, while the troops draw the larger sizes of clothing, they take the smaller boots and shoes. In a portion of those purchased by contract, brass-wire screws are used in the seams instead of thread or wooden pegs.

It is believed that these shoes, though at present rather more costly than sewed or pegged shoes, will be better suited to the hard work and various soils to which they are exposed in Army use.

A certain quantity of material for tents and for clothing has been subjected to a process alleged to be preservative by protecting the material from the attacks of moths and of mildew. The result is not yet developed, but thus far the process gives promise of success.

But six claims for clothing and equipage taken during the war have been received during the year. They amount to \$9,165 05. Most of these have been settled, some being retained, awaiting further proof.

Full tables accompanying this report give detailed information in relation to the clothing and equipage on hand, and disposed of in various ways during the year.

Many years since it was ordered by the War Department that the wooden bunks, used in barracks, difficult to keep clean and affording harbor for vermin, should be replaced by single iron bunks. The war interfered with the provision of such bunks, very necessary to health and morale of troops, and the work is now in progress. The estimates submitted for the next year contemplate the completion of this work.

The service to which these iron bedsteads are exposed in barracks is severe, and several patterns heretofore in use have failed in actual service.

Two patterns are now manufactured, which are believed to be well fitted for use. They have been tried at several posts, and thus far always with favorable results. One is made of bar-iron, the other of



gas pipe: both have wooden slats to support the bed, and are easily taken apart for transportation. Both are so arranged that in the daytime they can be piled three tiers high without disturbing the bedding, but when in use at night they are all put upon the floor, and no soldier will be obliged to sleep over his comrade's bed.

#### TRANSPORTATION BY RAILROAD.

There have been transported by the Quartermaster's Department by railroad during the year:

Persons.....	30,001
Animals.....	3,839
Freight, pounds, 62,000,521, or 34,330 tons	

The bills for the railroad service during the year, paid by officers or examined in this office and referred to the accounting officers for settlement, amount to \$1,998,916 35. Of these, there were on account of—

Union Pacific Railroad, 300 accounts, amounting to.....	\$812,812 55
Kansas Pacific Railroad, 36 accounts, amounting to.....	255,693 85
Central Pacific Railroad, 29 accounts, amounting to.....	65,213 74
Western Pacific Railroad, 16 accounts, amounting to.....	1,730 50
	<hr/> 1,135,360 64 <hr/>

The movement on account of military service over the Union Pacific was, persons, 6,945; and pounds of freight, 24,245,385. Over the Kansas Pacific, persons, 4,323; and pounds of freight, 10,526,215. Central Pacific and Western Pacific Railroads, persons, 478; and pounds of freight, 977,188. Total military movement over the United States Pacific Railroads, 11,746 persons, and 35,748,788 pounds, or 17,874 tons of freight.

One-half the amount earned by these roads, and audited, has been paid to them in cash; the other half has been retained by the Treasury to apply on the interest of the bonds of the United States issued in aid of the railroads.

A great saving in the cost of supply of the troops in the interior and on the Pacific coast has been effected by these roads, and several military posts heretofore maintained at great expense have been abandoned as the railroads have reclaimed the wilderness. But it has been necessary to push the troops further north and south of the railroad lines in order to protect advancing settlements, and the opening and working of mines.

#### TRANSPORTATION BY WAGON.

Difficulties, owing to the offer of straw bids, delayed the usual contracts for land transportation in Texas, to the increased cost and expense of the Department.

The lowest bidders were not to be found; others, on technical or frivolous pretexts, refused to enter into contract, or to abide by the proposals they had sent in.

Similar difficulties arose in Dakota in contracting for both land and river transportation.

Such difficulties are inseparable from the contract system, yet it is on the whole the cheapest and best for so large a service. All delinquents are reported to the Department of Justice, in order that where it may appear to the judicial officers possible to punish them, or to recover upon their bonds and guarantees, they may be prosecuted.

The result of the suits has not yet been communicated to this office.

The movement by these wagon routes during the year has been, of persons, 3,287; of freight, 43,383,178 pounds, or 21,691 tons. The cost thereof, so far as ascertained and settled, has been \$1,457,543 40.

In the fiscal year ending June 30, 1869, the movement by wagon route was, persons, 3,839; freight, 27,316 pounds; costing \$1,673,508 44, showing a decrease in two years with the decrease of the Army, but not in proportion to that decrease. The country to be occupied is even more extensive, and the troops must make up by activity what they have lost in force of numbers.

The rates of wagon transportation have been, on route No. 2, Department of Missouri, \$1 21 per 100 pounds per 100 miles; on route No. 1, Minnesota and Dakota, \$1 27; on the Montana route, \$1 57½, which do not differ materially from those of 1868-'69.

#### TRANSPORTATION BY STAGE.

Six hundred and thirty-nine persons, and 881,815 pounds, or 221 tons of freight, were moved by stage during the year, at a cost of \$43,331 20. Tolls have been paid to the amount of \$18,098 31.

#### TRANSPORTATION BY WATER.

Seven steamers and two schooners have been in service as transports under charter during the year, at a cost of \$27,650 14.

Two steamers, two schooners, and two sloops, used by the United States, have been employed, at a cost of \$24,104 19.

The steam transport Newberne, employed in supplying troops in Alaska, was sold April 4, 1871, for \$55,000, coin, as after the withdrawal of most of the troops from Alaska her services were not necessary.

The total movement by water transport, reported during the year, is: 37,195 persons, 1,897 animals, and 58,884,996 pounds, or 29,442½ tons of freight, costing \$679,339 49.

A small steam-launch is being built to keep up communication between Fort Pulaski and Savannah, as no regular line, willing or able, at moderate cost, to do the necessary work, exists. The exposure of the troops in open row-boats in that malarious climate has been injurious to health. The labor has been very severe, and the service unsatisfactory.

The accounts for transportation during the year are not as yet all settled. Those from the Pacific railroads which have not been paid by local disbursing officers of the Department, but have been settled through the Treasury, in order that the proper credits may be given at the Treasury on account of earnings reserved to meet interest on United States bonds, come in some time after the rendition of service, and in settling these accounts the small balances of the appropriation of transportation, which can be restored by disbursing officers after settling the year's liabilities of their respective offices, will be exhausted.

The payment and settlements thus far made on account of transportation amount, as reported, to \$4,198,805 54; of this, \$2,452,269 25 has been paid through disbursing officers; \$1,746,536 25 has been examined in this office and transmitted to the Treasury for settlement, through the Third Auditor and Second Comptroller.

#### BARRACKS AND QUARTERS.

The appropriation for barracks and quarters pays for rent of all buildings rented, through the Quartermaster's Department, for the use of the

Army. This includes rents of store-houses, offices for headquarters, and for disbursing officers, quarters for officers and for troops, military hospitals and hospital buildings. It is charged, also, with the commutation of quarters of soldiers on duty as clerks, with the construction and repair of all military buildings for use of troops and for shelter of their stores at old established posts, or at such new posts as may be established during the year.

The extension into the wilderness of railways and traveled routes, the settlement of agricultural and mining districts, require new stations to be occupied every year; and the return of a considerable force to the Southern States under the provisions of the enforcement bill has required expenditures in renting or erecting buildings for their shelter in places newly occupied.

The appropriations made by Congress for this purpose have not lately been sufficient to meet the actual wants of the Army, and the troops at many stations have been refused the means of providing such reasonable shelter as they have a right to expect and to ask for. Whatever the limited sums at the disposal of the Quartermaster's Department has enabled the War Department to do, has been done, but it has been necessary, for want of money applicable to the purpose, to refuse funds and materials for putting a number of posts into proper condition.

One hundred and thirty-five new buildings of all kinds have been constructed during the year under authority of the Secretary of War, at a cost of \$890,687.

They are in the States and Territories of Alabama, Arizona, California, Colorado, Louisiana, Dakota, Florida, Idaho, Kansas, Maryland, Massachusetts, Michigan, Nebraska, Nevada, New Mexico, New York, North Carolina, Oregon, South Carolina, Virginia, Texas, and Wyoming.

Three new wharves have been built, costing \$13,600.

Such reported necessary repairs of buildings as required special authority from the Secretary of War have been duly submitted for his action, and the sum of \$89,859 has been devoted thereto; but ordinary repairs, not involving heavy expenditures, have been made when necessary, and have consumed a large sum, which has not as yet been specially reported and separated from the general accounts of expenditures.

The expenditures for construction and repairs thus far analyzed show that the expenditures for different departments and divisions have been as follows:

<b>Division of Atlantic:</b>		
Department of the East .....	\$66,774	
Department of the Lakes .....	2,229	
		\$69,003
<b>Division of the South:</b>		
Department of the South .....	54,319	
Department of Texas .....	394,364	
		448,683
<b>Division of the Missouri:</b>		
Department of Missouri .....	216,689	
Department of Platte .....	130,000	
Department of Dakota .....	104,730	
		451,419
<b>Division of the Pacific:</b>		
Department of California .....	12,681	
Department of Columbia .....	12,400	
		25,081
		<u>994,186</u>

## NEW POSTS.

A new post for one company has been established at the head-waters of the Rio Verde, Arizona, and one at the Sweetwater mines, Wyoming Territory, to be known as Camp Stambaugh.

There are about five thousand buildings of all kinds in charge of the Department; many of them, however, are of the rudest construction and of small original cost.

The shelter of the troops in the treeless regions now occupied is more costly than it was when the frontier posts were in thickly wooded districts. There are places in Texas and Arizona, and on the plains, where the timber necessary for roofing and flooring is hauled by wagon trains hundreds of miles. In such regions, adobe or rough stone walls are used for military buildings, and the cost of even these rude materials at the remote posts is very large.

One hundred and ninety-four buildings of various kinds, no longer needed, have been sold during the year.

## BERGEN HEIGHTS ARSENAL, NEW JERSEY.

This property, under the requirements of the law of February 3, 1871, has been sold at public auction, after due advertisement. A deed has, as required by the law, been executed by the Secretary of War to John Halliard, the highest bidder, at the price of \$71,000, cash.

The property was purchased many years since, and the site then cost \$2,100. The buildings erected thereon by the United States were not large or valuable, the increased value arising principally from the appreciation of the ground.

The armory building in the public park or mall in this city, occupied during and since the war as a military store-house by the Quartermaster's Department, has been relinquished to the Territorial Government, for use of the District militia, for whom it was originally built by a special appropriation of Congress.

The barracks and engineer buildings at Yerba Buena Island, harbor of San Francisco, have been transferred to this Department.

Sites for necessary public buildings at Omaha, Nebraska, at Jeffersonville, Indiana, and at San Antonio, Texas, have been transferred by the citizens in the cities named to the United States.

The fire-proof warehouse at Jeffersonville, for which Congress made an appropriation of \$150,000, is now under construction by contract, and when completed it will enable the Department to dispense with many of the watchmen and other employés, reducing the annual expenses of the depot by a sum which, in a few years, will save more than the cost of the building.

The contracts offer a fair prospect of completing the building a little within the sum appropriated.

Many millions of dollars of military supplies now exposed to destruction by fire, and to guard which a large fire apparatus and many watchmen are necessary, will then be placed in security.

The completion of the depot at San Antonio, for which the city has given a site, will reduce the large rent-roll of the Quartermaster's Department in that city, now approaching \$25,000 a year.

## EXPLORING EXPEDITIONS.

The expedition for exploration of parts of Nevada and Arizona, under command of Lieutenant G. M. Wheeler, Corps of Engineers, has been

provided with a large part of its transportation by this Department, under orders of the Secretary of War, and the sum of \$37,435 has been placed at the disposal of its commander, for purchase of supplies at places at which those of the Quartermaster's Department may not be available.

Transportation and forage have also been supplied to the expedition of the 40th parallel, under Professor Clarence King, geologist.

Aid, by sale of supplies and loan of means of transportation for his party, has also, under order of the Secretary of War, been given in the exploration of the Upper Yellowstone country, to Professor Hayden.

#### INDEBTED RAILROADS.

At the beginning of the fiscal year, of the railroads which, in 1865, purchased the railroad equipment of the Quartermaster's Department, under orders of the President, twenty-three have paid off their debts in full, with interest.

Their payments amounted to .....	\$2,379,004 04
Twenty-eight roads were still in debt to the United States, the total debt, interest, and expenses paid being .....	2,265,584 29
Total collected .....	4,644,588 33
The debt, interest, and expenses remaining unpaid, amount to .....	\$1,646,522 68
During the fiscal year interest accrued upon this debt, and expenses chargeable to the companies have been incurred to the amount of ....	\$274,323 71
Payments have been made, either in money, or in postal or in military transportation and services, to the amount of .....	196,495 86
Leaving a balance against the companies on the year's business, of .....	77,827 85
Which added to the debt of June 30, 1870, makes the total sum now due and unpaid by these railroads on July 1, 1871 .....	4,724,350 53

Accompanying this report is a statement showing the original amount of the debt incurred by the companies, total interest and expenses to June 30, 1871, to which I refer for more detailed information.

Four companies have extinguished their debt during the year by paying or earning by postal and military transportation \$86,563 89. They are the Atlantic and North Carolina, the Macon and Brunswick, the Selma and Meridian, and the San Antonio and Mexican Gulf Railroads.

Ten companies have paid something on account of their debts and interest, in all \$78,538 10, and reducing the principal of their debt by the sum of \$39,333 38. They are the Alexandria, Loudoun and Hampshire; Alabama and Florida; Alabama and Chattanooga; East Tennessee and Virginia; Mississippi and Tennessee; Memphis and Ohio; Memphis and Little Rock; Pacific Railroad of Missouri; Southwest Branch of Pacific Railroad of Missouri; and Selma, Rome and Dalton.

Eleven companies, which have paid during the year \$31,393 87, have not paid enough to meet the accruing interest, so that their debt has increased during the year by \$200,403 17. They are, East Tennessee and Georgia; Edgefield and Kentucky; Knoxville and Kentucky; McMinnville and Manchester; Mississippi, Gainesville and Tuscaloosa; Memphis, Clarksville and Louisville; Mobile and Ohio; Nashville and Chattanooga; Nashville and Northwestern; Nashville and Decatur; New Orleans and Ohio.

The debt of the Indianola Railroad Company remains unchanged.

That of the Washington, Alexandria and Georgetown Company was paid off in full shortly after the close of the fiscal year on August 16, 1871.

The following table shows the debt on 30th June, 1871, of the principal delinquent railroads, with the payments or credits earned during the year, and the increase of debt and interest and expenses unpaid during the year:

Railroads.	Total unpaid June 30, 1871.	Total paid during the fiscal year.	Increase of debt dur- ing year.
Nashville and Chattanooga.....	\$1,857,393 41	\$5,610 88	\$93,166 53
Nashville and Northwestern.....	701,720 87	24 20	38,022 67
Nashville and Decatur.....	321,348 18		20 40
Memphis, Clarksville and Louisville.....	444,067 66	1,727 71	23,467 95

The Nashville and Chattanooga has, however, given orders for the application of part of its mail earnings, that for the first three-quarters of the fiscal year, but the Department has not yet succeeded in collecting the money.

The Nashville and Decatur refuses to give the necessary orders for the amount due for postal service, in accordance with its contract and bond.

At the last session of the Forty-first Congress a law was enacted authorizing the Secretary of War to compromise, adjust, and settle the suits pending against certain railroads on account of these debts, if, on advice of the counsel of record in these suits, he should deem it advisable.

On the 23d June this office was advised that, under this law, a proposition from the Nashville and Chattanooga Railroad Company had been accepted, to pay, in full of its debt the sum of one million of dollars, one-half ten years from the first of June, 1871, the other half twenty years from the same date, interest at 4 per cent. per annum, to be paid semi-annually on the first days of December and June.

No progress has been made during the year in the suits against those companies which refuse to pay their debts, action being suspended under the law above cited.

Claims presented by the Nashville and Chattanooga, and Nashville and Northwestern Railroad Companies, for use and damage of their roads and property during the war, amounting, as claimed by the Nashville and Chattanooga Railroad, to \$4,557,092 64, and by the Nashville and Northwestern Road to \$848,140 69, referred to this office by the Third Auditor of the Treasury, to whom they had been presented after being rejected here, were duly returned with unfavorable report, and, on 12th June, 1871, the Auditor advised the Quartermaster General that he had rejected the claims, and that the Second Comptroller concurred in the rejection.

Claims of the East Tennessee and Virginia, and East Tennessee and Georgia Railroads, amounting, respectively, to \$751,200 07 and \$765,912 33, referred to this office by the Third Auditor, were returned on 18th July, also with recommendation that they be rejected.

#### CLAIMS.

Claims for services and for property not paid for at the time the liability was incurred by disbursing officers, are sent to this office for investigation and action.

Such as require the action of the Secretary of War are, after examination, reported to his office, with recommendation in each case. Others

are referred to the accounting officers of the Treasury, with such information as this office can obtain from the reports of officers of the Quartermaster's Department, or others, and with such recommendation as may be proper. Others, again, are settled by reference for payment to a disbursing officer.

The law of 4th July, 1864, and acts amendatory thereof, imposed upon the Quartermaster General the duty of investigating the claims for quartermaster's stores alleged to have been used by the Army in the loyal and certain of the border States, with a view to the payment of such as were found to have originated within the prescribed limits, and to be just and payable within the rules laid down by the act of Congress, which were, generally, that the owner must have been loyal, the property taken for and used by the Army, and the claim just, and that it originated within the prescribed territorial limits.

In tables accompanying this report will be found detailed statements of the number and amount of claims of all classes presented to this office since the beginning of the war, and of the action taken thereon.

*Claims for quartermaster's stores, under act of 4th July, 1864, chapter 240.*

Under this act there have been filed 28,039 claims, for \$17,811,140 66; 4,970 of these, amounting to \$2,955,755 81, have been reduced \$77,672 76, and settled by reference to the Third Auditor for payment of \$2,078,083 05; 13,923 have been rejected, these amount to \$8,308,254 07; 6,231 have been suspended—amount, \$2,663,636 35; 3,935 have as yet received no decision, amounting to \$3,884,094 45.

During the fiscal year the number of these claims allowed was five hundred and twenty, amounting, as presented, to \$250,064 16; which were reduced in amount \$47,765 42, and the sum recommended to the Third Auditor for payment thereon was \$202,298 74. Sixty such claims have been rejected during the year, amounting to \$132,148 07. There remain on file, not finally decided, 10,166 claims, amounting to \$6,547,130 80.

*Miscellaneous claims filed in Quartermaster General's Office since commencement of the war.*

There have been presented to this office since the commencement of the war, in 1861, 64,972 miscellaneous claims, amounting to \$34,436,251 90; of these 3,682, amounting to \$20,380,303 29, have been reduced by the sum of \$1,345,620 44, and settled by payment of \$19,034,682 85; 18,705 have been rejected, amounting to \$7,598,767 84; 5,281 have been suspended, amounting to \$1,220,210 08; which, with 9,304 not finally acted on, leave on file, for future decision, 14,585 miscellaneous claims, amounting, as presented, to \$7,457,183 82.

These miscellaneous claims represent the alleged purchases, seizures, contracts, and services during the war, which officers of the Quartermaster's Department failed to settle because of want of funds, non-presentation, or because they had not authority to settle them, or believed them to be unjust, or not well proved.

While the amount is large, it is but a small portion of a business exceeding \$1,200,000,000, expended under the direction of this office during the war and in consequence of its operations.

The action upon these claims during the fiscal year ending 30th June, 1871, has been settlement of 846 claims, for \$232,511 68, by allowance of \$225,693 54; rejection of 197 claims, for \$53,548 36.

There remain on file, for future decision, 14,585, amounting, as presented, to \$7,457,183 82.

*Claims and accounts on account of transportation.*

On 1st July, 1870, there were on file in this office—

One thousand one hundred and sixty-two claims and accounts relative to transportation, amounting to.....	\$1,244,788 65
One hundred and seventy-one accounts for.....	802,983 13
Four hundred and sixty-three claims for.....	8,394,963 72

were received and filed during the fiscal year. Total presented 1,796, amounting to .....	10,442,935 50
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During the fiscal year there were referred for settlement—

Five hundred and twenty-two claims, for.....	\$1,237,014 14
Eight hundred and ten accounts.....	509,502 15
Total.....	1,746,516 29

There were transferred to the other bureaus to which they properly pertained—

Twenty-eight, amounting to .....	\$7,353 04
There were rejected one hundred and ninety-three claims, amounting to.....	6,860,881 31
There were suspended, at close of the year, ten, amounting to.....	5,111 62
The total number thus settled, suspended, or rejected, was 1,563, amounting to.....	8,619,863 96

At the close of the year there remained awaiting action two hundred and thirty-three of these transportation claims and accounts, amounting to \$1,822,793 20.

Among the heavy claims rejected during the year were claims from railroads captured and used by the Army for military purposes, for use or destruction of the roads, and bridges, and other property, viz :

By Nashville and Chattanooga Railroad.....	\$4,557,092 64
Nashville and Northwestern Railroad.....	848,140 69
Total.....	5,405,233 33

The following have also, since the termination of the year, been returned to the Third Auditor, with report that they should be rejected :

East Tennessee and Virginia Railroad.....	\$751,200 67
East Tennessee and Georgia Railroad.....	765,912 33
Total.....	1,517,113 00

A claim for services of steamer John Faron, during the war, amounting to \$511,000, is also among those rejected during the year.

In view of the very large interests of citizens and of the Government in the business and values represented in these claims, I call attention to the fact that all the evidence for and against them remains in this office until acted upon here, and that then only the papers relating to those which have been referred to the Treasury for allowance are removed to the Treasury Building, where they are safe. The rest remain in this office, exposed to destruction at any moment by fire, for, from the construction of this building it would be impossible to save the building and its contents if a fire once gained headway within its walls.



## NATIONAL MILITARY CEMETERIES.

There are 72 national military cemeteries in charge of this Department, to which should be added the cemeteries of Antietam and Gettysburgh, in the construction and establishment of which this Department bore a part, making in all 74 national military cemeteries. In these are interred 303,536 soldiers, who perished during the war.

In 316 private and post cemeteries are interred the remains of 14,314 others, well cared for, and whose rest it has been thought best not to disturb by removal to national cemeteries.

The total number cared for by the United States thus far is 317,850.

During the fiscal year the graves of 2,295 soldiers, not before discovered, have been reported to this office; and the remains have been removed to national cemeteries.

The grounds have been well cared for. Some of the cemeteries are very beautiful, and are much resorted to by the public. They occupy about 1,800 acres of land, much of which is now the property of the United States, acquired under the acts of 28th July, 1866, 22d February, 1867, and joint resolution of 13th April, 1866, at a total cost for the fee simple of about \$170,000.

A schedule, herewith, gives names of cemeteries, of former owners, and of prices paid for the sites.

The expenditure incurred in collecting the dead into national cemeteries, out of the general appropriations of the Quartermaster's Department, before Congress passed laws recognizing and establishing national cemeteries, and prescribing the mode of acquiring possession and title, and of inclosing and maintaining them, was \$2,446,882 94.

The following appropriations have been made by Congress for national cemeteries, viz:

By act of Congress of July 23, 1866 .....	\$50,000 00
By act of Congress of February 22, 1867 .....	750,000 00
By act of Congress of March 3, 1869 .....	600,000 00
By act of Congress of July 15, 1870 .....	300,000 00

Total .....	1,700,000 00
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Part of appropriation under act of March 3, 1869, returned to surplus fund, by act of July 12, 1870, section 5 .....	\$146,576 68
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Total amount of appropriations for national cemeteries, expended ....	\$1,553,423 32
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Total amount of general appropriations expended on cemeteries .....	2,446,882 94
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Total expenditure in gathering the dead into, and in establishing and maintaining military cemeteries .....	4,000,306 26
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During the fiscal year ending June 30, 1871, the entire appropriation for the year, (by act of Congress of July 15, 1870,) \$300,000, was expended.

The appropriation for the current year is not sufficient for the work which should now be in progress. The law requires every cemetery to be surrounded by a wall or an iron railing, and every grave to be marked by some permanent monument.

The cemeteries, when first laid out, were surrounded by wooden fences, and the graves marked by wooden head-boards. As these decayed, walls or railings have been erected, and hedges have been planted; but the wooden head-boards have not yet been replaced by permanent marks. Advertisements issued in November, 1866, showed that a permanent head-block for every grave, bearing an inscription in raised letters, giving number, name, rank, regiment, and company, and

date of death of occupant of each grave, could be procured for about \$1 15, but the Secretary of War, to whom the bids were submitted, did not then authorize the work to be undertaken, and the wooden head-boards have been set up as they fell from decay, or have been replaced by numbered stakes, while awaiting the execution of the law of February 22, 1867. (Statutes at Large, volume 14, page 399, section 2.)

The following cemeteries had been permanently inclosed before June 30, 1870, with stone walls: Chattanooga, Fort Donelson, Pittsburgh Landing, Tennessee; Mill Springs, Camp Nelson, and Lebanon, Kentucky; New Albany, Indiana; Little Rock, Arkansas; and that of San Antonio, Texas.

With brick walls: Mobile, Alabama, and Barrancas, Florida.

With iron railings: Loudon Park, Baltimore, Maryland, and two sides of the Chalmette Cemetery, New Orleans, Louisiana.

During the fiscal year stone walls have been erected or begun at Soldiers' Home and Battle Cemeteries, District of Columbia; at Arlington, Alexandria, Ball's Bluff, Hampton, Petersburg, Richmond, Winchester, and Yorktown, Virginia; at Annapolis, Maryland; New Berne and Wilmington, North Carolina, and at Jefferson Barracks, Missouri.

A brick wall at the Cold Harbor Cemetery, Virginia, and iron railings at Keokuk, Iowa, Rock Island, Illinois, and on the roadside of the Soldiers' Home Cemetery, District of Columbia.

Some of these walls were erected without coping, it being the intention to secure as many permanent inclosures as possible with the funds appropriated, and to provide coping from future appropriations. But the Secretary of War having decided that it was better to cope all the walls as erected, coping is now being provided for those not thus furnished when first built.

A handsome arched gateway to the Arlington Cemetery is in progress. Hedges, generally of Osage orange, have been planted during the year in most of the national cemeteries.

Thirty-five cemeteries still need permanent inclosures. They are: Alexandria, Baton Rouge, and Port Hudson, Louisiana; Andersonville and Marietta, Georgia; Beaufort and Florence, South Carolina; Salisbury and Raleigh, North Carolina; City Point, Culpeper Court-House, Danville, Fort Harrison, Fredericksburg, Glendale, Seven Pines, and Staunton, Virginia; Grafton, West Virginia; Beverly, New Jersey; Mound City and Camp Butler, Illinois; Nashville, Murfreesborough, Knoxville, and Memphis, Tennessee; Fort Leavenworth and Fort Scott, Kansas; Jefferson City and Springfield, Missouri; Corinth, Natchez, and Vicksburg, Mississippi; Fayetteville, Arkansas; Fort Gibson, Indian Territory; and Brownsville, Texas.

Seventeen permanent stone or brick lodges had been erected before June 30, 1870, at the following cemeteries, viz: Richmond, Virginia; Salisbury, North Carolina; Beaufort and Florence, South Carolina; Marietta, Georgia; Barrancas, Florida; Natchez and Vicksburg, Mississippi; Chalmette, Louisiana; San Antonio, Texas; Mound City and Camp Butler, Illinois; Jefferson Barracks, Missouri; Fort Leavenworth, Kansas; Fort Smith and Little Rock, Arkansas; and Keokuk, Iowa.

During the fiscal year seventeen permanent lodges have been built or commenced: Stone lodges at Soldiers' Home and Battle, District of Columbia; Alexandria, City Point, Cold Harbor, Fredericksburg, Fort Harrison, Hampton, Petersburg, Staunton, Winchester, and Yorktown, Virginia; New Berne and Wilmington, North Carolina; and brick lodges at Annapolis, Maryland; Cypress Hill, New York; and New Albany, Indiana.

Twenty-seven cemeteries are still without lodges, some of which will be constructed during the current year. Those not provided on June 30, 1871, were: Alexandria, Baton Rouge, and Port Hudson, Louisiana; Andoverville, Georgia; Raleigh, North Carolina; Culpeper Court-House, Denville, Glendale, and Seven Pines, Virginia; Grafton, West Virginia; Camp Nelson, McIl Springs, and Lebanon, Kentucky; Chattanooga, Knoxville, Memphis, Murfreesborough, Nashville, Fort Donelson, and Sevier, Tennessee; Corinth, Mississippi; Fayetteville, Arkansas; Fort Gibson, Indian Territory; Fort Scott, Kansas; Jefferson City and Springfield, Missouri; and Brownsville, Texas.

With the \$20,000 which the appropriation bill of July 15, 1870, directed to be expended in planting the national cemeteries, 120,000 feet of long and 28,500 evergreen and deciduous trees and shrubs have been set out. About fourteen thousand more will be planted this fall. They are generally doing well, and will much improve the appearance of the cemeteries when grown.

The twenty-sixth volume of the Roll of Honor is just being distributed.

#### REGULATIONS.

During the year, with advice of a board of officers of experience in the Quartermaster's Department, the regulations of the Quartermaster's Department have been carefully revised; the forms of returns and accounts and reports simplified, and made to conform to the orders and instructions and laws published since the regulations of 1863 were issued.

The general scheme of accountability for money and property in the Quartermaster's Department is simple, and has borne the test of service and of war. Claims from citizens, inquiries from committees of Congress in relation to property purchased or taken by the Army, and to the application of the public funds during the war, are received in great numbers; and information to support just claims, to defeat those which are unjust, and to answer all reasonable inquiries, is generally found on record.

Believing that the system which has stood this test is sound and good, it has not been thought well to make considerable change in it.

The number of printed forms is large, but it is cheaper to print one distinct form for every common case than to spend time and clerk hire in writing out the formal terms of bills, and receipts, and reports. Full instructions as to the cases in which each blank is to be used, and what is to be added with it when used, should be printed on the back of the blank form itself, and thus, which is a great aid to the inexperienced officer who finds himself for the first time called upon to act as acting Quartermaster, to open accounts, and bear responsibility for Government moneys and property, has been provided for in this scheme of revised regulations, submitted to the Secretary of War on the 15th January last.

There is no effectual mode of preventing waste and extravagance, or of detecting and punishing them when committed, without a complete and detailed prescribed system of accounts for money and of returns and accounts for property intrusted to officers. Such a system is sometimes denounced as interfering with free and quick action, but it has not been found in honest and reliable hands incompatible with supply and support of a very large army, very quickly raised and organized, and without it this Army would have suffered, perhaps dissolved, for want of supplies regularly provided and delivered at every point of need.

It is not probable that the same vast amount of money was ever disbursed and applied to the purposes for which it was granted with so little loss by dishonesty or waste as during the late great war.

Men, hastily appointed from all occupations of civil life, found themselves suddenly placed in charge of vast sums of money and of great quantities of valuable property, and, by the simple system adopted by the Army regulations, they were able to bear their responsibility, and to apply the money and the supplies to the proper use, and to make such accounts of their responsibility as to save themselves from loss and from suspicion.

#### SITES FOR POSTS IN TEXAS.

Owing to the property in all public lands of Texas being in the State and not in the United States, and to the restrictions imposed upon the War Department by the law of May 1, 1820, Statutes at Large, volume 3, chapter 52, section 7, page 568, which forbids the purchase of any lands for use of the United States without a special law authorizing it, most of the military posts in Texas have been established upon lands to which the United States has no title.

These posts have generally been located far in advance of any settlement, and, when located, there has probably been generally no knowledge of the condition of the title, whether in the State, or taken up and entered under State laws by individuals.

Such lands, until occupied and protected, have generally had very little value. Probably twenty-five cents per acre would be a large price for lands in the vicinity of most of the frontier posts in Texas, even after protection was assured by their occupation by troops of the United States; but the moment the United States begins to build shelter for the troops, the lands are, if the property of the State, entered by some citizen, or, if the property of an unlettered person, purchased by some man of business, who sees in them, occupied and improved by the United States, a prospect of great improvement in value and the foundation of a claim for rent or sale.

The War Department, in the present state of the law, is helpless in this matter. If the demands of those who hold title are extravagant, it has generally thus far declined to pay rent. It is prohibited by law from purchasing.

Some of the sites in Texas have a certain value as containing springs of water, which in some parts of that State are well-known stopping-places for traders, and travelers, and for warriors; and these springs are gradually being taken up and made private property at prices probably not exceeding twenty-five or fifty cents per acre for the land which must be entered in order to control them. Without the use of these springs, very large tracts in the neighborhood are valueless, indeed uninhabitable.

I recommend that the attention of Congress be called to this subject, and that the Secretary of War be clothed with authority to purchase the sites of such military posts as are already or as may be within a few years established in Texas, at prices which he may determine to be just and reasonable, considering the value of the land before its occupation by the United States.

I see no other mode of settling a very disputed and important question.

If this authority is granted, a moderate appropriation should be made to pay for the land.

The sites, when occupied by the United States, had little intrinsic

value. Their present value depends in a great degree upon the improvements made by the United States for the protection of the State and its inhabitants.

The reports of officers on duty in this office, which are herewith, and the accompanying tables, are referred to for information in detail upon the several subjects of this report.

Respectfully submitted,

M. C. MEIGS,

*Quartermaster General, Brevet Major General, U. S. A.*

Hon. WM. W. BELKNAP, *Secretary of War.*

*List of papers accompanying the annual report of the Quartermaster General for the fiscal year ending June 30, 1871.*

- 1.—Report of Colonel Robert Allen, assistant quartermaster general, U. S. A., of the operations of the inspection branch of the Quartermaster General's Office, during the fiscal year ending June 30, 1871.

Accompanying papers:

- A.—List of officers on duty in the Quartermaster's Department during the fiscal year, including officers of the line on duty as acting assistant quartermasters.
- B.—Report of the stations and duties of officers of the Quartermaster's Department on July 1, 1871.
- 2.—Report of Major J. D. Bingham, quartermaster, U. S. A., of the operations of the accounting branch of the Quartermaster General's Office during the fiscal year ending June 30, 1871.
- 3.—Report of Major J. D. Bingham, quartermaster, U. S. A., of the operations of the clothing branch of the Quartermaster General's Office during the fiscal year ending June 30, 1871.

Accompanying papers:

- A.—Statement showing the quantity of clothing, camp and garrison equipage, and clothing materials in the hands of officers June 30, 1870, the quantity purchased, manufactured, sold, lost, and issued during the fiscal year, and quantity on hand June 30, 1871.
- B.—Statement showing expenditures on account of clothing, camp and garrison equipage, and materials, at the principal depots, during the fiscal year.
- C.—Statement of amounts received from sales of clothing, camp and garrison equipage and materials during the fiscal year.
- D.—Statement of claims for property purchased and seized for the use of the Army, received and acted upon in the clothing and equipage branch of the Quartermaster General's Office during the fiscal year.
- E.—Statement of returns of clothing, camp and garrison equipage received, examined, and transmitted to the Treasury Department, and of letters received and written during the fiscal year.
- 4.—Report of Major J. D. Bingham, quartermaster, U. S. A., of the operations of the cemeterial branch of the Quartermaster General's Office during the fiscal year ending June 30, 1871.

Accompanying papers:

- A.—Tabular statement of permanent improvements on national cemeteries.
- B.—Tabular record of titles to land occupied by United States for national cemeteries.
- C.—Consolidated report of work accomplished on national cemeteries prior to and during the fiscal year.
- D.—Schedule of "roll of honor" and statements of final disposition of bodies, published by the Quartermaster General.
- E.—Brief sketches of national cemeteries.
- 5.—Report of Major M. I. Ludington, quartermaster, U. S. A., of the operations of the regular supplies, transportation, and barracks and quarters branch of the Quartermaster General's Office, during the fiscal year ending June 30, 1871.

Accompanying papers:

- A.—Statement of public funds in possession of Major M. I. Ludington during the fiscal year.
- B.—Statement of the indebtedness of southern railroad companies for railway material for the fiscal year.
- C.—Abstract of contracts for wagon transportation entered into by the Quartermaster's Department during the fiscal year.

- D.—Statement of vessels chartered, impressed, and employed during the fiscal year.
- E.—Statement of vessels owned or purchased by the Quartermaster's Department during the fiscal year.
- F.—Abstract of contracts for water transportation during the fiscal year.
- G.—Statement of all troops and stores transported under direction of the Quartermaster's Department during the fiscal year.
- H.—Statement of amounts paid on account of rail, river, stage, and wagon transportation by the Quartermaster's Department during the fiscal year.
- I.—Statement of accounts and claims on account of transportation for the fiscal year.
- K.—Statement of miscellaneous claims filed and acted upon during the fiscal year.
- L.—Statement of claims filed under the act of July 4, 1864, during the fiscal year.
- M.—General statement of claims and accounts for the fiscal year.
- N.—Statement of miscellaneous claims filed since the commencement of the war.
- O.—Statement of claims filed in the Quartermaster General's Office, under the act of July 4, 1864.

## REPORT OF THE COMMISSARY GENERAL OF SUBSISTENCE

WAR DEPARTMENT,  
OFFICE OF COMMISSARY GENERAL OF SUBSISTENCE,  
*Washington, October 17, 1871.*

SIR: In compliance with the directions of the honorable Secretary of War, communicated to the Chiefs of Bureaus of the War Department in the circular from the Adjutant General's Office of September 9, 1871, I have the honor to submit this annual report of the operations of the Subsistence Department for the fiscal year terminating June 30, 1871.

No general or extensive changes in the distribution of the Army having taken place during the last fiscal year, the sources, purchase, and mode of distribution of subsistence stores, as indicated in my last annual report, remain substantially unchanged. I remark, in this connection, that I am more and more confirmed in my views—always approved by yourself—that it is best, on many accounts, to purchase subsistence stores for the troops from the producers and dealers at the several points of issue, when they can be so obtained of the proper quality, and at cost not in excess of the total cost when purchased in the large and more distant markets of the country and transported by the Quartermaster's Department.

But very few instances of complaint of the subsistence stores furnished the Army during the last year, either as to deficiency in quantity or inferiority of quality, have occurred, and those would not probably have been made except that it is the duty of inspectors general to observe and report upon all supplies that do not attain a perfect standard.

It is believed that no army has ever been better supplied than the Army of the United States during the past year. For this result the credit is of course largely due to the officers of the Subsistence Department, who habitually give their personal attention to the quality and condition of their purchases as well as to the active and unremitting supervision of the assistant commissaries general and the commissaries acting as such, who, at the headquarters of military divisions and departments, supervise the affairs of the Subsistence Department within such divisions and departments.

While the regular Army ration is believed to be composed of the proper number and kinds of articles, and of very nearly the proper quantities of each, still I am of opinion that it should be provided in the contemplated regulations for the Army that, according to the varying hygienic necessities of the troops stationed in the widely diverse

climates of the United States and Territories, there should be authorized and provided for issue, under proper medical advice and military orders, other or substitute articles, so that the food of the soldier may be occasionally varied from the regular ration. This is now effected, to a considerable degree, by the sale of any savings of their rations made by soldiers, and the use of the proceeds of such sales in the purchase of vegetables or other articles of food. This mode of varying the food of troops is readily practicable when they are stationed in the settled parts of the country, but on the distant frontiers and at places where gardening is impracticable the provision recommended becomes necessary. I have made suggestions accordingly in the regulations sent in from this Bureau for the consideration of the Secretary of War.

One of the colonels and the two lieutenant colonels, assistant commissaries general, and one of the senior majors, acting as such, are stationed at the headquarters of the Divisions of the Atlantic, the Pacific, the Missouri, and the South, viz, Philadelphia, San Francisco, Chicago, and Louisville, and have general charge of the affairs of the Subsistence Department within their respective divisions. Nine of the commissaries of the rank of major and captain are stationed at the headquarters of the Military Departments of the East, the South, the Missouri, the Lakes, California, the Platte, the Columbia, Dakota, and Texas, acting as assistant commissaries general of such military departments, and usually also performing the duties of purchasing and depot commissaries. The remaining officers of this Department are stationed at important points of purchase or at depots, as New Orleans, Chicago, Washington, Sioux City, Baltimore, Denver, St. Louis, Santa Fé, and Fort Union, or are on duty in this Bureau; every officer of the Department being on duty.

During the fiscal year ending June 30, 1871, there were reported to this office 249 advertisements inviting proposals for furnishing supplies; 265 contracts for fresh beef and beef-cattle; 70 contracts for complete rations; 101 contracts for miscellaneous articles; and 576 contracts consisting of written proposals and acceptances.

The average price of fresh beef, per contracts made during the year, was as follows in the several States and Territories:

State or Territory.	Cents per pound.	State or Territory.	Cents per pound.	State or Territory.	Cents per pound.
Maine .....	13.04	Alabama .....	8.75	Indian Territory .....	8.87
Massachusetts .....	11.50	Mississippi .....	10.41	Iowa Territory .....	9.46
Rhode Island .....	14.50	Louisiana .....	7.58	Wyoming Territory .....	7.50
Connecticut .....	14.50	Texas .....	4.25	New Mexico Territory .....	8.33
New York .....	12.27	Tennessee .....	9.29	Colorado Territory .....	12.63
Pennsylvania .....	11.77	Kentucky .....	10.07	Utah Territory .....	12.75
Delaware .....	16.00	Ohio .....	11.60	Montana Territory .....	12.92
Maryland .....	12.35	Indiana .....	9.50	California .....	9.60
District of Columbia .....	11.68	Illinois .....	8.87	Oregon .....	9.71
Virginia .....	14.27	Michigan .....	10.85	Arizona Territory .....	12.43
North Carolina .....	14.12	Missouri .....	8.28	Washington Territory .....	10.37
South Carolina .....	10.00	Minnesota .....	10.52	Idaho Territory .....	15.04
Georgia .....	10.00	Nebraska .....	9.10	Nevada .....	14.16
Florida .....	9.30	Kansas .....	11.11		

Giving an average contract price of 11.00 cents per pound net for the year.

The first cost of the regular Army ration at the principal points of purchase, has been as follows:

Date.	New York, N. Y.	Baltimore, Md.	Louisville, Ky.	St. Louis, Mo.	St. Paul, Minn.	Omaha, Nebr.	Fort Leavenworth, Kans.	New Orleans, La.	Chicago, Ill.	San Francisco, Cal.
1870.	Cents.	Cents.	Cents.	Cents.	Cents.	Cents.	Cents.	Cents.	Cents.	Cents.
July .....	20.81	22.29	20.29	22.35	18.65	20.18	18.81	22.03	20.26	21.7
August .....	22.31	24.88	19.71	22.03	20.16	20.54	19.60	21.20	21.35	21.3
September .....	21.40	22.30	19.49	19.23	19.72	21.52	19.27	21.04	21.27	21.2
October .....	20.16	22.38	20.14	22.61	18.86	19.85	19.27	20.81	20.51	21.2
November .....	20.73	20.77	20.12	18.72	19.21	20.07	18.50	20.64	20.50	21.2
December .....	18.96	22.50	19.15	22.62	17.35	20.06	20.45	19.17	17.11	21.3
1871.										
January .....	18.68	19.83	18.48	16.61	17.45	19.22	18.94	20.23	15.68	21.7
February .....	19.16	22.90	19.22	18.88	17.23	17.63	18.85	20.01	18.22	21.2
March .....	17.70	18.39	19.36	18.85	17.68	17.43	18.49	19.28	18.23	21.2
April .....	17.62	19.11	19.11	18.67	17.43	17.23	17.57	18.47	16.02	21.2
May .....	16.05	17.91	18.49	18.21	17.03	17.20	18.11	18.27	17.20	21.2
June .....	15.48	17.64	17.92	17.11	17.36	17.49	16.79	17.66	17.04	21.2
Average .....	19.08	20.91	19.29	19.67	18.26	19.03	18.76	19.96	18.73	21.2

Giving, as the general average, nineteen cents and fifty-six hundredths per ration, being a decrease of one cent and ninety-seven hundredths from the price of the previous year.

Under the requirements of section 6 of the act of March 3, 1865, and of War Department General Orders No. 52, of March 30, 1865, tobacco has been furnished to the enlisted men of the Army at cost prices; the total cost of the quantity sold to them being about \$16,212 per month for the year.

From the date at which the Subsistence Department commenced furnishing tobacco for sale to the enlisted men of the Army, in 1866, to June 30, 1871, the amount furnished, as shown by the returns transmitted by this Bureau to the Paymaster General, has been, in money value, \$921,859 67. Of this sum there appears to have been repaid to the subsistence appropriations by transfers at the Treasury, from the amounts withheld by the Pay Department from the pay of the individual soldiers to whom the tobacco was furnished, the sum of \$755,316 65, leaving still due the subsistence appropriation on this account the sum of \$166,543 02, which sum will be repaid by further transfers when the accounts of the various paymasters making the stoppages shall be adjusted.

The hospitals of the Bureau of Freedmen, Refugees, &c., have during the year been furnished on the requisitions of the Commissioner or his agents with subsistence stores to the value of \$37,605 27. Of this, the sum of \$2,898 76 has been transferred at the Treasury to the appropriation for Army subsistence, leaving a balance of \$34,706 51 for future transfer.

Under the provisions of section 16, act of June 30, 1834, and paragraph 1202 Revised Regulations for the Army, 1863, subsistence stores, valued at \$85,337 04, have been issued to Indians of the various tribes visiting the military posts on the frontier or in their respective nations.



Issues have also been made to Indians under proper instructions, and to meet special emergencies, as follows:

At Fort Defiance, New Mexico, valued at.....	\$41,744 49
At Livingston, Texas, valued at.....	813 29
At Fort Stevenson, Dakota Territory, valued at.....	5,461 58
At Cheyenne agency, Dakota Territory, valued at.....	115 00
At Forts Laramie and Fetterman, Washington Territory, valued at.....	150,261 16
At Fort Rice, Dakota Territory, valued at.....	5,105 51
At Fort Buford, Dakota Territory, valued at.....	3 44
At Fort Shaw, Montana Territory, valued at.....	73 89

Making ..... 203,578 27

Of which amount the following has been refunded to the appropriations for Army subsistence:

For issues at Cheyenne agency, Dakota Territory .....	\$115 00
For issues at Livingston, Texas .....	813 29
For issues at Fort Stevenson, Dakota Territory .....	5,093 33
	<hr/>
	6,021 62

Since my last annual report there has been furnished the Department of the Interior a detailed statement of the expenses incurred in the fiscal year 1869-'70, by the Subsistence Department, in furnishing the Indian Department with supplies for the Indians at Fort Sill and Camp Supply, Indian Territory, and at Cheyenne, Whetstone, Grand River, Yankton, and Crow Creek agencies, and other points on the Upper Missouri River, which expenses were to be repaid to the subsistence appropriation from the appropriation of \$2,000,000, made by section 4 of the act of April 10, 1860. That statement shows the amount to have been \$1,647,243 82, of which \$1,200,000 has been repaid by transfer at the Treasury, leaving a balance due the subsistence appropriation of \$447,243 82.

Under the third section of the act approved July 4, 1864, requiring the Commissary General of Subsistence to cause claims for subsistence supplies furnished for the Army during the war in the States not in rebellion, and subsequently extended to include claims from the State of Tennessee, and the counties of Berkeley and Jefferson, West Virginia, there have been received, up to the 30th day of September last, 5,747 claims, amounting to the sum of \$3,115,570 35.

Ninety-six of these claims, amounting to \$8,006 42, accompanied by regular vouchers given by the officer at the time of purchasing the stores, have been recommended for payment by the Third Auditor as purchases under contract; and 1,197 of them for \$371,822 have been examined and recommended for payment under this act in the sum of \$270,214 29; and 4,330 of them, aggregating \$2,617,322 95, have been examined and disallowed.

It has been the practice of this office to allow the reopening of disallowed claims under this act upon the presentation of additional evidence on the part of the claimant, but hereafter this practice will be restricted to those cases, if any, in which the new evidence (except in correction of reports made to this office) shall be material, and it shall fully appear that it was not known to, or was not attainable by, the claimants prior to the first decision in their cases.

The act of Congress approved March 3, 1871, making appropriations for the support of the Army for the year ending June 30, 1872, and for other purposes, by which the President was authorized to appoint a board of commissioners to receive, examine, and consider the validity and justice of the claims of citizens who remained loyal to the Govern-

ment of the United States during the rebellion, for stores or supplies taken or furnished during the rebellion for the use of the Army in States proclaimed as in insurrection, the Attorney General held, in his opinion dated April 6, 1871, terminated the authority of this office to examine claims from Tennessee, Berkeley and Jefferson Counties, West Virginia under the act of July 4, 1864. But by section 27 of the act approved April 20, 1871, making appropriations to supply deficiencies, and for other purposes, Congress declared that the jurisdiction extending from the act of July 4, 1864, to claims from Tennessee, and the counties of Berkeley and Jefferson, should not be withdrawn or impaired by any construction of the law creating commissioners of claims, and that the jurisdiction upon all claims presented to the proper Department by loyal citizens from Tennessee and the two counties named, before the 31st March, 1871, should remain as before the passage of the act creating the commission of claims.

Claims from Tennessee and the said Berkeley and Jefferson Counties are, therefore, if filed under the act of July 4, 1864, prior to March 31, 1871, still acted upon, but if presented subsequent to that date are held without action for want of jurisdiction; for Congress by express declaration having continued action upon all the claims in question filed prior to March 3, 1871, by necessary implication withholds jurisdiction upon all such claims presented subsequent to that date.

The payment of commutation of rations to Union soldiers, prisoners of war, and to their heirs, has been continued under the joint resolution of July 25, 1866, and section 3, act of March 2, 1867, and 6,335 such certificates, aggregating \$279,769, have now been received and paid.

During the year there were received, from 614 different officers of the Army who have been on duty in the Subsistence Department, and who were responsible for subsistence supplies or funds, the following monthly and quarterly papers, each with its proper vouchers:

Returns of provisions .....	3.15
Returns of commissary property .....	1.4
Accounts current .....	3.4

Making a total of .....

of which 7,805 have been examined and forwarded to the Third Auditor of the Treasury for final settlement, leaving in this office for examination, or awaiting correction, 363.

Under the act of June 23, 1870, authorizing the proper accounting officers of the Treasury, in the settlement of certain accounts of disbursing officers at the War and Navy Departments, to allow such credits for overpayments and for losses of funds, vouchers, and property, as they may deem just and reasonable, when recommended under authority of the Secretaries of War and Navy, by the heads of the military and naval Bureaus to which such accounts respectively pertain, credits have during the past fiscal year, been recommended by me in the cases of forty officers, amounting in the aggregate to the sum of \$18,131.36. Fully three-fourths of this amount arose from errors due to the inexperience of the officers, or the exigencies of active service in the field. The officers were mostly those who served during the war, and who have retired to civil life.

I have the honor to be, very respectfully, your obedient servant,

A. B. EATON,

*Commissary General Subsistence.*

Hon. WM. W. BELKNAP,  
*Secretary of War.*

## REPORT OF THE SURGEON GENERAL.

WAR DEPARTMENT, SURGEON GENERAL'S OFFICE,  
Washington, D. C., October 5, 1871.

SIR: I have the honor to submit the following statement of finances and general transactions of the Medical Department of the Army for the fiscal year ending June 30, 1871:

## FINANCIAL STATEMENT.

The funds of the Medical Department for the year ending June 30, 1871, consisted of—

Balance in the Treasury, July 1, 1870.....	\$1,388,634 99
Balance in the hands of disbursing officers.....	218,429 23
Appropriation for the medical museum and library by act of July 15, 1870.....	8,000 00
Deficiency appropriation by act of March 3, 1871.....	100,000 00
Proceeds of sales.....	177,830 30
Amount received for board in hospitals.....	6,140 46
Amount recovered for property lost or damaged.....	20 60
Derived from all other sources.....	114 10
	<hr/>
	1,899,169 74

## The disbursements were—

<b>I. In payment of claims and fulfilling contracts prior to July 1, 1870:</b>	
For medical and hospital supplies.....	\$41,248 37
For medical and other services.....	6,970 52
For expenses of depots.....	339 20
For artificial limbs.....	5,334 00
For care of soldiers in private hospitals.....	622 25
Salvage paid on vessel carrying medical supplies.....	10,750 72
Internal revenue.....	243 82
	<hr/>
	\$65,508 86
<b>II. Current expenses of the year:*</b>	
For medical and hospital supplies.....	200,571 67
For medical and other services.....	15,099 17
For expenses of depots.....	37,925 65
For office and incidental expenses of the Medical Department.....	5,583 42
For medical museum and library.....	8,000 00
For care of soldiers in private hospitals.....	257 17
	<hr/>
	267,477 08
Balance in the Treasury, June 30, 1871.....	1,422,082 91
Balance in the hands of disbursing officers.....	144,100 87
	<hr/>
	1,566,183 78
	<hr/>
	1,899,169 74
In addition to the above there remained on July 1, 1870, of the sum of \$750,000, appropriated by act of March 3, 1869, to enable the Secretary of the Treasury to settle the accounts of disbursing officers.....	
	<hr/>
	\$150,920 70
Transferred during the year.....	\$70,609 55
Balance remaining June 30, 1871.....	80,251 15
	<hr/>
	\$150,920 70
Of the appropriation by act of July 5, 1862, for the comfort of sick and discharged soldiers, there remained, July 1, 1870.....	
	<hr/>
	\$315,364 07

\* Medical and hospital supplies to the amount of about \$30,000 were contracted for but not received and paid for before the close of the fiscal year, and thus remained a charge against the unexpended balance, making the entire expenses of the year \$267,477 08.

Expended during the year:		
For treatment and care in hospitals, and for surgical appliances .....	\$8,165 66	
For transporting destitute soldiers to their homes. ....	7,395 64	
Balance, June 30, 1871. ....		\$15,561 30
Total .....		299,502 77
		315,364 00

## ARTIFICIAL LIMBS.

Congress having, by acts approved June 17 and 30, 1870, provided for a reissue of artificial limbs to persons disabled in the military or naval service of the United States, leaving it optional with each to receive a limb in kind or a stated commutation in money, the number who availed themselves of these acts, up to June 30, 1871, was 8,918.

These received—	In kind.	Commutation.
Arms .....	104	4,067
Legs .....	1,117	3,114
Feet .....	5	51
Apparatus for resection. ....	22	529

The number of persons furnished with limbs under the acts previous to June 17, 1870, was 7,887, of whom 1,367 have not applied under the present law, and may, with few exceptions, be presumed to be dead. It thus appears that 2,398 have been admitted under the acts of June, 1870, who had not applied under the previous laws, doubtless for the reason that their injuries were of such a nature that they could not wear artificial limbs with advantage.

## HEALTH OF THE ARMY DURING THE YEAR.

The monthly reports of sick and wounded received at this office for the fiscal year terminating June 30, 1871, represent an annual average mean strength of 29,365 *white*, and 2,608 *colored* troops.

Among the *white* troops, the total number of cases of all kinds reported as taken on the sick list was 63,507, being at the rate of 2,163 per 1,000 of mean strength. (That is about two entries on sick report during the year for each man.) Of the whole number taken on sick report 54,710, or 1,863 per 1,000 of strength were for disease alone, and 8,797, or 300 per 1,000 of strength were wounds, accidents, and injuries of all kinds.

The average number constantly on sick report during the year was 1,480, or 51 per 1,000 of strength; of these 1,190, or 41 per 1,000 of strength were under treatment for disease, and 290, or 10 per 1,000 of strength for wounds, accidents, and injuries.

The total number of deaths reported was 519, or 17 per 1,000 of mean strength. Of these 363, or 12 per 1,000 of strength, died of disease, and 156, or 5 per 1,000 of strength, of wounds, accidents, and injuries.

The total mortality rate is greater than that for the previous year. the chief increase occurring in the proportion of deaths from disease. The proportion of deaths from all cases treated was 1 death to 122 cases.

One thousand and ninety-one *white* soldiers are reported to have been discharged on "surgeon's certificate of disability," being at the rate of 37 per 1,000 of mean strength.

The reports from the *colored* troops give the following figures, which do not include the white officers:

The total number of cases of all kinds reported was 3,551, or 1,362 per 1,000 of strength. Of these 2,964, or 1,137 per 1,000 of strength, were cases of disease, and 587, or 225 per 1,000 of strength, were wounds, accidents, and injuries.

The average number constantly on sick-report was 104, or 40 per 1,000, of whom 74, or 28 per 1,000, were under treatment for disease, and 30, or 12 per 1,000, for wounds, accidents, and injuries.

The number of deaths from all causes reported was 49, or 19 per 1,000 of strength. Of these 28, or 11 per 1,000 of strength, died of disease, and 21, or 8 per 1,000 of strength, of wounds, accidents, and injuries. The proportion of deaths from all causes to cases treated was 1 to 72.

The number of discharges on "surgeon's certificate of disability" was 71, being at the rate of 27 per 1,000 of mean strength.

#### WORK PERFORMED IN THE RECORD AND PENSION DIVISION.

The official demands for information from the files of record and pension division have diminished but little during the year. As heretofore, the inquiries refer chiefly to the cause of death, or discharge from service, and the hospital history of soldiers dead or disabled during the war of the rebellion. The books of the closed general hospitals and other records on file give the information sought in the majority of instances; but a tedious search is often required, particularly when the inquiry refers to the hospital history of a soldier who has been transferred from hospital to hospital during the progress of his treatment. Cases of this class have formed recently a large proportion of the inquiries, making the labor of reply great, while, as the information is needed for the settlement of pension and other claims, the utmost accuracy is required in each case to protect the interests of the Government as well as to do justice to the applicant.

At the commencement of the fiscal year 3,440 such applications were awaiting reply, and 19,844 new applications were received during the year, making a total of 23,284 applications to be searched and replied to.

Owing to the inadequate clerical force, search could not be made and replies furnished in all of these cases, although 14,040 were acted upon, leaving 9,244 unanswered at the close of the fiscal year. This has now, however, been remedied by the increase recently authorized by the Honorable Secretary of War, and it is hoped that within a year all this accumulated business will be disposed of, and that it will be possible thereafter to furnish the desired information with reasonable dispatch.

#### WORK PERFORMED IN THE DIVISION OF SURGICAL RECORDS.

There were entered on the registers the histories of 5,210 surgical cases of the late war, making a total of 235,398 now recorded; also additional information respecting 9,661 cases already recorded, and prepared for revision abstracts of 8,947 cases which were not placed on the permanent registers. The hospital record of 22,756 men was searched; 16,008 names were indexed. The pension medical examiners' reports of the condition, at the latest dates, of mutilated men, were transcribed in 2,564 instances. Histories of surgical cases were furnished to other departments of the Government in sixty-five instances.

## ARMY MEDICAL MUSEUM.

The Army medical museum continues to increase in the number and variety of specimens and its consequent usefulness. The number of specimens added during the year was 1,516, a present total of 15,018. The number of visitors was over 15,000 during the year.

## MEDICAL AND SURGICAL HISTORY OF THE WAR, ETC.

Part first of the Medical and Surgical History of the War is near completion, and will be laid before Congress during its coming session when it is hoped sufficient appropriation will be made to continue the publication of the remaining parts. Circular No. 4, a report upon barracks and hospitals, with a description of military posts throughout the United States, compiled by Assistant Surgeon J. S. Billings, United States Army; Circular No. 3, 1870, approved plans and specifications for post hospitals—also, a revised edition of the same, (Circular No. 2, 1871)—have been published during the year, and the standard supply table of the Medical Department of the Army, (Circular No. 1, 1871,) has been carefully revised and published with a view to more rigid responsibility and greater efficiency.

## NUMBER OF MEDICAL OFFICERS, ETC.

At the date of my last annual report two vacancies in the grade of surgeon and forty-two in assistant surgeon of the Army existed. During the past year one surgeon and one assistant surgeon have died, one assistant surgeon retired, and one assistant surgeon cashiered, leaving at present fifty-four vacancies in the corps, viz, chief medical purveyor, one assistant medical purveyor, three surgeons, and forty-nine assistant surgeons. The number of military posts requiring medical attendance was, on July 1, 1871, 206, at many of which the number of troops was so large, or the nature of the duties so onerous, that the services of two medical officers were constantly required at them. If the restrictions as to promotions and appointments in the medical corps were removed at once, it would require several years, through the prescribed modes of annual examination, to restore it to the standard number allowed by existing laws, and the reduction of that number, by stoppage of promotion and appointments, has proved to be prejudicial to the interests of the service, both in a sanitary and economical view.

J. K. BARNES,

*Surgeon General, United States Army.*

The Honorable the SECRETARY OF WAR.

## REPORT OF THE PAYMASTER GENERAL.

PAYMASTER GENERAL'S OFFICE,  
*Washington, October 9, 1871.*

SIR: I have the honor to submit my annual report of the transactions of the Pay Department of the Army for the fiscal year ending June 30, 1871.

Tabular statements accompanying show in detail the fiscal operations of the Department for that year, summarily stated as follows:

Balance on hand at the beginning of the fiscal year, (July 1, 1870).....	\$3,379,683 41
Received during the fiscal year from the Treasury.....	17,738,000 00
Received from other sources .....	161,552 95
Total.....	<u>21,279,236 36</u>
Disbursed to the Army, including the Military Academy .....	\$15,830,901 43
Disbursed to volunteers, (back pay and bounty).....	2,683,172 44
Total disbursements.....	18,514,073 87
Refunded to Treasury.....	60,938 63
Balance in hands of paymasters to be accounted for in next report.....	2,704,223 86
Total .....	<u>\$21,279,236 36</u>

RECEIPTS AND DISBURSEMENTS ON ACCOUNT OF RECONSTRUCTION FUND FOR FISCAL YEAR ENDING JUNE 30, 1871.

Balance in hands of paymasters, June 30, 1870.....	\$277,813 21
Received from sundry sources.....	110 00
Total .....	<u>277,923 21</u>
Accounted for as follows:	
Expenses of reconstruction paid.....	\$155,990 58
Internal revenue tax .....	2,190 26
Total disbursements.....	158,180 84
Refunded to Treasury.....	119,018 85
Balance in hands of paymasters, June 30, 1871.....	723 52
Total.....	<u>277,923 21</u>

The Army has been fully paid, and all other requirements of the Department have been faithfully executed.

PAYMASTERS.

The number (sixty) of paymasters allowed by the law of July 28, 1866, is now reduced by casualties to fifty-one. Though the strength of the Army has, in pursuance of law, been materially reduced during the past year, that circumstance does not admit of a proportional reduction of the number of paymasters, because there is not yet, nor is it probable there will be, a material diminution of the number of garrisoned posts. As urged in my last annual report, it is the multitude of widely scattered small detachments covering the face of the continent, largely in the unsettled Indian districts, that creates the necessity for so large a force of paymasters, and gives unceasing employment on the frontier to the greater portion of them.

RECONSTRUCTION.

The receipts and disbursements on account of reconstruction during the fiscal year are exhibited summarily in the statement at the beginning of this report. The officers of this Department continued to make the disbursements until all the States were admitted to representation in Congress, and all the approved claims presented had been paid, when the unexpended balances of the appropriation remaining were refunded

to the Treasury, remitting to the accounting officers the adjustment of any possible claims in that behalf yet unsettled.

#### PAYMASTERS' DRAFTS.

It becomes my duty to suggest, as of eminent importance to the service and to the public, that Congress be asked to authorize the issue and direct the payment in all cases of duplicate checks to supply lost original checks, issued upon satisfactory proof of such loss and under regulations to be prescribed by the Secretary of the Treasury. Such issue of duplicate checks by paymasters is now virtually prohibited except in a single class of cases, namely, those in payment of additional bounties. That virtual prohibition results from the construction of the Treasury Department, announced in a circular of the Second Comptroller dated May 15, 1871, which I here quote entire that the subject may be the better understood :

SIR: In the act entitled "An act to facilitate the payment of soldiers' bounties under act of 1866," approved March 19, 1868, it is provided (section 3,) that the assistant treasurers of the United States in the cities of New York and San Francisco be, and they are hereby, directed to pay duplicate checks for bounties granted under the said act upon notice and proof of the loss of the original check or checks under such regulations as the Secretary of the Treasury may direct.

On the 15th of May, 1868, the Secretary issued instructions regulating the issue and payment of duplicates of checks issued in payment of bounty under the act of July 28, 1866, as provided in that act.

It will be observed that the above act and instructions apply *only* to checks issued in payment of additional bounty; but as the plan adopted was considered to be a safe one so far as the Government is concerned, and in many cases a great convenience to claimants, it has been extended to cases of lost checks *other* than those issued in payment of said bounty.

At the last session of Congress a bill was introduced providing a general system for the issue and payment of duplicates of lost checks drawn by disbursing officers of the United States, under such rules and regulations as should be prescribed by the Secretary of the Treasury.

This bill Congress declined to pass in the form presented, but modified it so as to apply only to checks issued in payment of pensions where the amounts do not exceed \$500.

As this matter has been brought to the attention of Congress, and as they have refused to authorize the issue and payment of duplicates of lost checks except in cases where the originals were issued in payment of additional bounty or pensions, this office will conform to what appears to be the legislative intent, and will hereafter decline to approve any duplicate check, except for additional bounty and pensions as specially authorized by law.

Now inasmuch as paymasters in the execution of their duties are called upon to issue checks for various other purposes than additional bounties—indeed are required by law to make all their payments by means of checks or drafts so far as the circumstances will permit that mode of payment—all such issues are, equally with bounty checks, of importance to the public service and entitled to the like protection.

Of these general checks are those transmitted to discharged soldiers, and the heirs of deceased soldiers, in payment of Treasury certificates, issued for back-pay and ordinary bounties, (not the *additional* under law of July 28, 1866.) Also, those issued in large numbers to officers and soldiers in the field and at remote stations for remittance to their families and friends, where no other possible means of remitting money is available to them except the very hazardous one of committing to the mails *money in kind*, which will rarely be ventured.

In the commercial world checks, drafts, or bills, payable to order, are considered absolutely the safe form of making remittances of money, because if lost in their transit a practicable process is always available for their renewal or duplication. What consideration of policy or of



the public interest should make the Government draft a less safe or convenient medium of remittance is not comprehended.

Respectfully submitted.

B. W. BRICE,  
*Paymaster General, U. S. A.*

The Honorable the SECRETARY OF WAR.

## REPORT OF THE CHIEF OF ORDNANCE.

WAR DEPARTMENT,  
*Ordnance Office, October 24, 1871.*

SIR: I have the honor to submit the following report of the principal operations of the Ordnance Department during the fiscal year ended June 30, 1871, with such remarks and recommendations as the interests of that branch of the military service seem to require.

The fiscal resources and disbursements of the Department during the year were as follows, viz:

Amount of appropriations in Treasury June 30, 1870 .....	\$14,499,779 70
Amount in Government depositories, to credit of disbursing officers, on same date .....	377,754 87
Amount of deposits in Treasury not reported to the credit of the appropriations on the same date .....	99,367 76
Amount of appropriations from July 1, 1870, to June 30, 1871, including the fixed annual appropriations for arming and equipping the militia .....	762,912 55
Amount received since June 30, 1870, on account of damages to arms in hands of troops, from sales of arms to officers, and condemned stores, and from all other sources not before mentioned .....	9,960,895 97
<b>Total</b> .....	<b>25,700,710 85</b>
Amount of expenditures since June 30, 1870 .....	*\$1,644,050 43
Amount of expenditures attending auction sales of ordnance stores since June 30, 1870, preparing them for sale and transporting them to place of sale .....	239,030 90
Amount of deposits in Treasury not reported to the credit of the appropriations .....	706,537 83
Amount in Government depositories to credit of disbursing officers on June 30, 1871 .....	346,796 52
Amount of appropriations in Treasury on same date .....	†22,764,395 17
<b>Total</b> .....	<b>25,700,710 85</b>

During the last fiscal year there existed a great demand in Europe for small-arms and other ordnance stores, and this Department took advantage of it and sold, at fair prices, about ten millions of dollars' worth of small-arms and other ordnance stores, under authority given by Congress in July, 1868. The proceeds of the sales, except a small sum which is retained to meet expenses incurred in preparing other stores for sale, have passed from the control of this Department and into the Treasury.

The operations at the arsenals have been confined chiefly to the manufacture of such supplies as were required for issue to the troops; the manufacture of a small extra supply of cartridges for small-arms; the care and preservation of the large quantities of ordnance stores

\* Of this sum over \$340,000 is for arms and ammunition made for the Navy Department, and \$31,610 60 for settlement of war claims.

† Of this sum only \$893,534 59 (under the appropriation for arming and the militia) is now available, the balance having, under the act of July 1 from the control of this Department for current expenditures.

which are on hand, and which require frequent overhauling and cleaning; and to the manufacture of one or two experimental gun-carriages.

The construction of the Rock Island Arsenal has been carried on as rapidly as the liberal appropriations made by Congress would allow. Two of the workshops are nearly completed, and will very shortly be occupied, one as a store-house, and the other in place of the temporary workshops which are to be removed. The act of Congress of April, 1864, authorized and empowered the Secretary of War to take possession of the whole of the island of Rock Island, and directed him to build thereon and maintain an arsenal for the construction, deposit, and repair of arms and munitions of war. It seems manifest that Congress intended that this arsenal should be made the great arsenal of deposit and construction for the Mississippi Valley, and that it should possess the manufacturing capacities of the national armory at Springfield, Massachusetts, and of one of our largest arsenals of construction, and it was planned with that end in view, and has been so built. Its location is most admirable, and its importance and value to the Government, especially in time of war, will be very great, almost incalculably so. A recent inspection of this arsenal has shown me that the work is being economically, rapidly, and well done. I hope that the appropriations asked for the next fiscal year will be granted by Congress.

The operations at the Springfield Armory have been confined chiefly to the conversion of a small number of Springfield rifle-muskets into breech-loaders for issue to troops, and to the States and colleges; to the manufacture of 22,000 Remington rifles for the Navy Department; and three or four kinds of experimental muskets and carbines, for comparative trial by troops in the field. Three of these systems have been put into the hands of the troops, and monthly reports are made to this Bureau upon them, as was directed by you on my indorsement of July 8, 1870, submitting the report of the board of officers of June 10, 1870, of which Major General Schofield was president.

It is expected that sufficient information in regard to these experimental arms will be derived from troops using them to warrant the appointment—some time next summer—of the board which is to select and recommend to the War Department a breech-loading system for adoption for the military service. It is highly important that this board shall act as soon as possible upon the subject, and that a breech-loading system shall be adopted as soon as possible, and adhered to until a large number of breech-loaders can be made for the Government. Now there are less than 10,000 breech-loading muskets in the arsenals for issue. This number of muskets is not half sufficient to supply the States with the muskets they are now entitled to receive under their apportionment of the permanent appropriation for arming and equipping the militia. It is important that the arms of the States should be like those used by the Government, and I believe the States are anxious to get the same kinds of arms. For these reasons I have been anxious to furnish them, to the extent of the ability of the Department and of their credits, with arms like those our troops are armed with, and I have not been willing to encourage any State in getting any other arms. This Department should, as soon as possible, be placed in a condition to fill all proper requisitions by the States upon it, and should also have on hand in store a large number of breech-loading muskets and carbines to meet any emergency that may arise. Ten years ago the country felt that not less than a million of muskets should be kept in store in the arsenals. We are making very few arms at present, and for the reason that no breech-loading arm has yet been adopted for our military service.

The conflicting interests of inventors and holders of patents on breech-loading small-arms have seriously embarrassed this Department in the selection of a system for adoption. It appears there are patents (one or more) upon all breech-loading small-arms, and it is not thought that any gun has been made, or can be made by the Government, upon which a claim for royalty will not be made against this Department. I have declined to give an opinion upon the validity of any patent which the Government may have used, or to recommend the allowance of royalty by the War Department on any small-arms which have been made by the Government; and I shall continue to do so, believing that the amount of compensation, and the persons who may be entitled to receive it, should be determined elsewhere than in the War Department.

In my annual report for 1869, I said :

The chief difficulties which this Department had to contend against in producing a good breech-loading musket, have arisen from the impossibility of making any improvement which is not immediately claimed under some one of the many patents which have been granted for improvements in fire-arms, and from the extreme eagerness and strong efforts of some inventors, and all other parties interested in patents, to have their improvements used by the Government. Many persons claim to hold patents for improvements which are used in the conversion of the Springfield muskets; in some instances several parties have claimed to hold patents for the same thing, and it is believed that every improvement is claimed by more than one inventor. The Bureau has declined to acknowledge the validity of any patents for improvements used in the conversion of the Springfield rifled musket, knowing that it was not competent for it to decide the question, and believing that the proper course for patentees to take was to establish satisfactorily the validity of their claims, and then apply to Congress for compensation for the use of the patents.

These difficulties have continued to embarrass this Department, and to affect injuriously the interests of the Government; and it is respectfully suggested whether a law may not be devised, which, while affording protection to all inventors in the rights secured to them by patents, will enable the Government to use unrestrictedly any improvement which it may be desirable for it to use. I have no desire to see any inventor deprived of any of his rights, without just compensation; but I am so fully convinced that some law protecting the Government against improper claims of inventors and owners of patents should be passed, that I feel it my duty to bring the matter particularly to your notice, in the hope that something may be done to secure so desirable an end. Such a law would relieve this Department of much annoyance and embarrassment, and would tend, in my opinion, to increase to a considerable degree the efficiency of the public service.

It is respectfully suggested that a law be passed which will authorize officers in charge of public works to make use of all inventions, or improvements whatever, applicable to the work under their charge; and which will provide that when a claim for damages is made by any person for an invention or improvement so used, at least — notice shall be given, requiring all parties claiming said invention or improvement to present their claims, with the evidence in support of the same, to some special tribunal authorized to try the same, whose duty it shall be to decide who is the party entitled to damages or remuneration, and to fix the amount which should be paid by the United States for the use of the invention or improvement; their decision to be final so far as the United States are concerned; and the amount declared to be due from the United States to be paid out of the appropriation for which the work done is paid.

I repeat this, and earnestly ask that such legislation may be requested of Congress as may be necessary to secure the rights of inventors and owners of patents, and to protect those of the Government and its agents. These latter are not protected now. The commanding officer of Springfield Armory and myself have, for more than a year, been subjected to the annoyance of a suit brought against us personally for our official action in having arms made at Springfield Armory under the orders of the Secretary of War, and the Government has at the same time been compelled to submit to an expensive lawsuit brought to restrain it from making the arms. Such a state of things ought not to exist.

A small number of revolvers (pistols) which use the primed meta-

cartridge, have been made and issued to troops, and the few reports upon them which have been received at this Bureau show that they are greatly superior to the revolvers which use the paper cartridges, and must supersede them in the service. As soon as a proper model can be selected it should be adopted, and steps should be taken to make at the National Armory all of them which the Government may require. It will be more economical for the Government to pay a fair royalty and manufacture the revolvers, than to purchase them from the manufacturer, who will charge both royalty and manufacturer's profit.

Benicia Arsenal has been for some years the principal and almost the only arsenal on the Pacific coast. A recent inspection has shown me that it should be made capable of doing all the necessary repairs of ordnance stores for the Pacific coast. The cost of transferring stores from the Pacific coast to arsenals on the Atlantic is so great that no stores should be sent east for repairs. My estimates for Benicia Arsenal have been made with a view to making it of sufficient capacity to do all the repairs of stores for the Pacific coast.

Since the date of my last report St. Louis Arsenal has been turned over to the Quartermaster's Department and converted into a cavalry recruiting depot; and Jefferson Barracks has, under your orders, been occupied as an arsenal. The transfer of the ordnance and ordnance stores from the arsenal to the barracks has been nearly completed. Jefferson Barracks is an excellent site for an arsenal, and its storehouses are capacious and in good order. Baton Rouge Arsenal has also, in pursuance of orders, been turned over to the Quartermaster's Department for garrison purposes, and was finally closed as an arsenal on the 15th of June last.

I respectfully renew my recommendation that the captured lands and buildings at Shreveport, Louisiana, and in Walker, Jefferson, Davis and Marion counties, Texas, which were turned over to this Department at the close of the war, be disposed of. They are of no use to this Department.

I also renew my recommendation that the following arsenals, which are no longer needed by this Department, be sold, viz: Rome, at Rome, New York; North Carolina, at Fayetteville, North Carolina; and Champlain, at Vergennes, Vermont. As the Mount Vernon Arsenal, in Alabama, has been ordered to be transferred to the Quartermaster's Department for Army purposes since the date of my last report, my recommendation for its sale is withdrawn.

I recommend that Congress be requested to authorize the sale of the magazine tract of land near Augusta Arsenal, Georgia. Extensive powder works were built upon it by the confederate government during the war, which are not wanted by this Department. The buildings and machinery are deteriorating, and their care is an expense to the Department.

No payment, except for a few lots, has yet been made on the Harper's Ferry property which was sold, in 1869, in accordance with the terms of the law directing the sale. The first payment should have been made last December, and the second and last payment should be made the 1st of next December. The title to the property has not been transferred by the United States, except for the few lots above referred to, and for those donated by the act authorizing the sale. Unless full payment for the property shall be made next December, it is my intention to report the fact to you and ask for instructions in the matter.

I still think that a large Arsenal of Construction, and a Powder and Niter Depot, should be established at some suitable points on the At

lantic coast, and I renew the recommendation made in my last report that Congress be requested to authorize and empower the Secretary of War to sell such of the arsenals as in his opinion have ceased to be required, and to apply the proceeds of their sales to the purchase of sites and the erection thereon of buildings for the arsenal and the depot. I respectfully invite attention to the remarks on this subject which are in my last report.

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#### ARMING AND EQUIPPING THE MILITIA.

This duty belongs to the Ordnance Department, and during the past fiscal year the following stores have been issued to the States, viz:

4 3-inch rifle-cannon, with carriages, caissons, harness, implements, and equipments.

6,874 Springfield breech-loading rifle-muskets, caliber .50.

291 Springfield cadet breech-loading rifle-muskets.

2,083 Springfield rifle-muskets, caliber .58.

210 Spencer carbines.

5 revolvers.

100 cavalry sabers.

90 musician's and non-commissioned officer's swords.

7,211 sets infantry accouterments.

100 sets cavalry accouterments.

100 sets horse equipments.

451,000 cartridges for small-arms.

75 3-inch rifle projectiles.

The act of April 23, 1808, in pursuance of which these issues were made, appropriates the sum of \$200,000 annually for the purpose of arming and equipping the militia of the United States, and this sum, by direction of Congress, is annually divided among the States and Territories according to their representation in Congress. It is the practice of this Department to credit the States and Territories annually with their proportion of this appropriation, and to charge them with the money value of all issues made to them. The States which were not represented in Congress during the war of the rebellion, and subsequently, have not been credited with any part of the appropriation for the period they were unrepresented, but this part of the appropriation has not been applied to the quotas of the other States. It is for you, or perhaps more properly for Congress, to direct how this sum, which has accrued, and which stands on the books of this office to the credit of the permanent appropriation, shall be applied—whether the States which were not represented in Congress shall be credited with their quotas, or whether their quotas shall be apportioned among the other States and Territories. Congress evidently intended in 1808, when it made the permanent annual appropriation of \$200,000 for arming and equipping the militia of the United States, that they should be armed and equipped by the Government, and it is important and proper that they should be, and that States should be encouraged to depend upon the General Government for these supplies. If in 1808, when the population of the United States did not exceed eight millions, the sum of \$200,000 per annum for arming and equipping the militia of the United States seemed necessary, it can hardly be thought that this sum is sufficient now, when the population has increased nearly fivefold; and the States are more desirous of obtaining arms for their militia for drill and instructions than they were in 1808.

Large sums of money were charged against some of the States for

arms, &c., furnished by this Department during the war, and other States, equally populous, had no charges made against them during the same period; and it seems to me highly probable that errors occurred in keeping the account with the States which do great injustice to some of them, but which this Bureau has no authority to correct. The principal, if not all, of the issues which were made to the States during the war, were made to them for the maintenance of the Government and the preservation of the Union, and should have been charged, as arms and other stores issued to volunteers, to the United States, and not to the States. If the errors can be corrected they should be. In my opinion it would be fairer and juster to the States to credit them with all issues made to them during the war, and charged on their quotas for arming and equipping the militia, than to let the accounts stand as they now are on the books of this office. Some of the States are now charged with a greater sum than their annual quotas will amount to in half a century, and under a proper decision of the War Department no issues can be made to States which are charged with arms and other stores in excess of their quotas. I respectfully suggest that it may be proper to invite legislation on this subject.

#### SEA-COAST GUNS.

In January, 1867, a board, composed of artillery, engineer, and ordnance officers, was appointed by the Secretary of War to fix the armament for the fortifications. The board unanimously reported that 805 smooth-bore guns, (20-inch, 15-inch, and 13-inch,) 810 rifle guns, (10-inch and 12-inch,) and 300 mortars, (13-inch and 15-inch,) would be required in addition to the guns which were then on hand, and recommended their procurement from time to time. The report was approved by the Secretary of War ad interim. Of the guns recommended by the board there were on hand at that time 1 20-inch smooth-bore, 295 15-inch smooth-bores, 59 13-inch mortars; and since that time about 25 15-inch guns have been procured by this Department, making the number about 320. There are no sea-coast rifle guns of the calibers recommended by the board on hand, and with my present knowledge I am unwilling to recommend the purchase of any rifle guns of the calibers recommended by the board for the armament of the fortifications. It is of the highest importance that we should have heavy rifle guns for the fortifications, and it can only be determined by actual experiment how, in what manner, and of what material they shall be made. The experiment must necessarily be costly, but the information to be derived from it will be worth more than tenfold its cost, and I earnestly recommend that authority to begin the experiment be asked of Congress. The principal nations of Europe, fully aware of the necessity of having heavy rifle guns for their coast defenses, have spent millions in their experiments in search of a reliable rifle gun for coast defense. We have confined our experiments to the trial of one or two cast-iron rifles. The results obtained will not warrant me in recommending that any cast-iron rifle guns be procured for arming the forts. We must try some other material for heavy rifle guns. A plan submitted to the Department by a Dr. Woobridge, of New York, by which the gun is made of bronze, and iron or steel wire, impressed me so favorably that I had a small gun, which had been made by the Navy Department, tested, and its strength and endurance were so great that I submitted the result to a board of officers, who recommended that a 12-inch rifle should be made on the plan and tested. The recommendation received the approval of the

Secretary of War, who authorized the experiment, and the gun was ordered. The act of July 12, 1870, which took effect a few days before the order for the gun was given, stopped the experiment, by withdrawing the money which was necessary for the experiment from the control of the War Department. I have estimated for funds for making the experiment, and I earnestly hope that it will be authorized by Congress. It ought to be made and without delay.

Our smooth-bore Rodman guns are regarded as reliable and perfectly fit for service. I shall continue to recommend their purchase, but shall spare no efforts to improve the quality of the metal of which these guns are made. Great improvement has been made within the last few years in the quality of cast iron for guns, and I believe that a still further improvement may be made by a change in the treatment of the metal in the furnace. I am having some experiments made to determine that question, and will submit the result of the experiments to you as soon as it is obtained.

A great improvement in powder for heavy guns has been made by us within the past few years by increasing the size of the grain and thereby reducing the rate of combustion, and it is thought that the powder may be still further improved. I am having some small samples made for experiment, and when tried the results will be reported to you.

My estimate for the next fiscal year includes a large sum under ordnance and ordnance stores, which is intended to be used in altering the 10-inch and 15-inch gun carriages which are now in service. When the 10 and 15-inch guns were adopted and introduced into the service, and iron carriages made for them, the charge of powder for the 10-inch gun was 14 pounds, and that for the 15-inch gun 60 pounds, and the carriages were made abundantly strong to withstand those charges. The charges have been increased to 20 pounds of powder for the 10-inch gun, and to 100 pounds of powder for the 15-inch gun, and it has been found that their carriages must be modified to adapt them for the largely increased charges. The required alterations should be made at once.

Very respectfully, your obedient servant,

A. B. DYER,  
*Chief of Ordnance.*

The SECRETARY OF WAR.

## REPORT OF THE CHIEF SIGNAL OFFICER.

WAR DEPARTMENT,  
OFFICE OF THE CHIEF SIGNAL OFFICER,  
*Washington, D. C., November 1, 1871.*

SIR: The signal school of instruction at Fort Whipple, Virginia, has been maintained during the past year, and, as in previous years, instruction has been given to officers of both the Army and Navy.

The course of study pursued by the naval officers has been similar to that described in the report of last year, consisting of the theory and practice of military and naval signaling and telegraphy, using as textbooks the "Manual of Signals," "Cully's Hand-book of Practical Telegraphy," and "Pope's Modern Practice of the Electric Telegraph."

The officers of the Army were instructed, in addition to the above-named branches, in the outlines of meteorology, including a practical

knowledge of the different meteorological instruments in ordinary use. In this branch of study the text-books have been Professor Loomis's *Treatise on*, and Buchan's *Hand-book of, Meteorology*. Special instructions were also given in the use of the especial system of weather reports adopted by this office, and in the care and management of stations of observation.

The number of naval officers fully instructed during the year has been twelve, and of officers of the Army, three; three officers of the Army are still under instruction. In addition to this number, two officers were instructed in meteorology alone, they having previously, in 1869, completed the other part of the course. One officer received a leave of absence immediately after his detail, with permission to leave the country, and has not yet returned.

Reference is made to Tables I and II, hereto annexed, in which is a list of all the officers instructed, with the date of report for duty, of announcement as competent as acting signal officers, and the actual amount of out-of-door or field practice had by each. The instruction of naval officers was temporarily suspended on the 10th of July, 1871, the Chief Signal Officer of the Navy representing that the weather during the summer months was, in his view, unsuited for field-work on the part of naval officers. Arrangements are now in process for the detail of another class of naval officers for instruction.

The instruction of the observer-sergeants required for duty in the division of telegrams and reports for the benefit of commerce has been an important feature of the school during the past year. These soldiers have been instructed in the theory, and in, as far as was practicable in the limited time allotted to the course, the practical uses of signaling and telegraphy; they have been schooled in the manual of arms and the duties of the soldier, but principal and prominent attention has been given, in the tuition marked out for them, to the subject of meteorology, in which the course has been as thorough as the nature of the circumstances would permit. Especial care has been given to that portion of the study relating to the uses of the various instruments with which each station of observation is supplied, and in the preparation of the ciphers and of the different forms employed in making, recording, and publishing the weather-reports, and in the general management of stations; the text-books used have been the "*Manual of Signals*," "*Pope's Modern Practice of the Electric Telegraph*," "*Loomis's Treatise on Meteorology*," with the "*Smithsonian Instructions to Meteorological Observers*," and the "*Instructions to Observer-sergeants*" issued by this office.

During the year, seventy-three sergeants have been under instruction. Of this number, twelve have not yet completed the course; two have been assigned to duty in the office of the Chief Signal Officer before completing the course; three were discharged before final examination: twelve failed to pass the examination as to their competency for the management of stations; ten of these latter have been discharged, and two are returned to the signal detachment from which they had been selected for promotion. The remaining sergeants, forty-four in number, have passed the required (observer's) examination and been assigned to duty at stations. Table III, herewith, gives in detail the names of the sergeants, date of report and examination, the result in each case, and the stations at which the observers are now on duty.

Second Lieutenant Allyn Capron, First United States Artillery, who was in immediate charge of instruction at the school as acting instructor at the date of last annual report, continued to act in that capacity until



May 18, of this year, when he was relieved from duty, under the direction of this office, at his own request, and returned to his regiment. He was a faithful and energetic instructor, taking a strong personal interest in the work, and under his charge a corresponding degree of interest in their studies was manifested by the classes.

Lieutenant Capron was succeeded by First Lieutenant Robert Craig, Fourth United States Artillery, acting signal officer, who took temporary charge as acting instructor until another officer could be fitted for the position.

First Lieutenant O. M. Mitchell, Fourth United States Artillery, acting signal officer, was assigned to duty as acting instructor June 2, 1871, but resigned his commission in the service June 16; he was succeeded by First Lieutenant G. S. Grimes, Second United States Artillery, acting signal officer, who performed the duties of acting instructor, in addition to his especial duty as post quartermaster, until relieved July 3, 1868. Second Lieutenant C. C. Wolcott, of the Third United States Artillery, having completed his course of study, was announced as acting signal officer and acting instructor July 7, 1871, and remains in immediate charge of instruction at this date. The numerous changes here referred to caused many and vexatious delays, and had an injurious effect upon the school. This effect has been gradually removed since the assignment of Lieutenant Wolcott as instructor. The tuition is now progressing in a satisfactory manner; the services rendered during the past year by the officers and men who have undergone the course is a sufficient commentary upon its value.

The instruction in military signaling and telegraphy, from the Military Academy at West Point, has been meager and unsatisfactory, and does not afford sufficient data for a detailed report here. It is understood, however, that a course has been pursued, and that the cadets of the first and second classes have received a partial instruction in the theory and practice of signaling and telegraphy.

It is in every way desirable that the course at the Military Academy be made as complete as it can be, in view of the brief time which can be devoted to it at that institution, and that it be conducted by an officer himself thoroughly instructed, and in such manner and in such complete communication with this office as is contemplated by the law providing for the discharge of the duties of the signal service.

The recommendation of this office, that the duty be made an especial branch of instruction, and that a merit value be given, affecting the standing of the cadets, as mentioned in the last annual report of the chief signal officer, is renewed.

The instruction in military signaling in the Departments of the South, of the Platte, and of Texas has been, during a portion of the last year in the charge of acting signal officers regularly instructed under the direction of this office.

The instruction in the Department of the Missouri has been under similar charge during the whole year. The results are exhibited in Table IV, herewith.

In the remaining geographical military departments, viz, those of New Mexico, Arizona, California, and the East, instruction has been attempted at isolated points, but not under the immediate direction of this office. This attempted instruction has been conducted under the provisions of General Order No. 19, Adjutant General's Office, March 18, 1869.

This order makes no provision for the instruction of the instructors, and officers acting under it have found themselves called upon to give

instructions in a branch of the service than which none requires more thorough practical knowledge, and wholly in want of practice themselves. It was wise, however, perhaps, that the experiment should be made. It has not been fruitless, for the attention it has caused to be given to the signal service throughout the Army has led to a knowledge of its duties, such as would enable most officers to avail themselves to some extent of expert and instructed signalists in time of war, and it has proven the necessity of the permanent retention of a corps of officers and enlisted men thoroughly instructed and drilled in military signaling and telegraphy. Upon officers and men so instructed in these especial duties only can there be reliance for the proper instruction of other officers and men where these instructions are needed, or for such discharge of the duties in the Army as the country has the right to expect in time of emergency or of war.

The wisdom of those acts of the Secretary of War and of the General of the Army which have established and maintained the signal-service post of Fort Whipple, and the corps of officers and men there serving, needs no other confirmation than the results of the irregular instruction elsewhere attempted throughout the Army.

It is recommended that the instruction in geographical departments, whenever attempted hereafter, should be under the guidance or direction of some thoroughly instructed officer at department headquarters, through whom the necessary reports shall be made to this office, and who shall, in addition, have general charge of the property pertaining to the service throughout that department.

Table IV, herewith, exhibits the signal equipments and signal stores issued during the year to the several military departments.

It has been possible to give but little attention to the practice in field telegraphy and the drills with the field telegraphic train. These specialties of military practice at Fort Whipple are of an importance to the service hardly to be overestimated. The very extensive and important duties suddenly imposed upon the office of the Chief Signal Officer and the signal service have, of necessity, taxed its abilities to the utmost, and the necessary withdrawal from the detachment of officers and men for duties in connection with the stations throughout the country so reduced its force that thorough drills have been impossible. A minor difficulty has been that the animals necessary for the movements of the trains could not be immediately procured.

Recent enlistments and additions to the detachment have increased its strength, and it is in contemplation to enter upon the drills of the train with the least practicable delay. The preliminary drills are already commenced.

During the past year experimental improvements have been made upon the vehicles of the train. It is desirable that every facility should be had for practice with and improvements of the service and of the drill. It is not necessary to comment on the value to the Army of a well-organized and properly equipped telegraphic service.

The duty discharged at Fort Whipple, Virginia, has been, during the past year, of paramount importance to all divisions of the signal service. It has been embarrassed to some extent by the frequent changes of officers, incident to the fact that the details for the service have been temporary, and by that discouragement of officers and men which always attends such changes.

The buildings at the fort are not well suited to the purposes to which the post is now devoted. It is recommended that permanent and better quarters and stables be provided and facilities given to place the post

and the school maintained at it in the best condition. A principal point to be gained when an assignment of an officer of suitable rank could be made to the command, and both officers and men there serving could be encouraged to attempt perfection in their especial duties by a reasonable certainty that their duties will be permanent.

The number of non-commissioned officers and privates on duty at Fort Whipple is eighty-one.

#### DIVISION OF TELEGRAMS AND REPORTS FOR THE BENEFIT OF COMMERCE.

At the date of the last annual report of this office the organization, form of duty, and plan of supply and of service of the office division of telegrams and reports for the benefit of commerce had been in part provided, but had had no test of actual practice.

On November 1, 1870, at 7.35 a. m., the first systematized synchronous meteoric reports ever taken in the United States were read from the instruments by the observer-sergeants of the signal service at twenty-four stations, and placed upon the telegraphic wires for transmission.

With the delivery of these reports at Washington, and at the other cities and ports to which it had been arranged they should be sent, such delivery was made by 9 a. m., commenced the practical working of this division of the signal service in this country.

The pleasant feeling with which the service was everywhere recognized, and the aid everywhere tendered and rendered the office, are known to the Secretary of War.

On the first day of report the tabular bulletin reports were bulletined and furnished at twenty-four cities. The organization and instructions seem to have been sufficiently minute to guard against accident or error, and the form and plan commenced with the first morning report has continued without need of alteration, as that under which the labor of the office for the past year has been conducted.

Paper 1 exhibits the bulletin as this day published at Washington, and summarizes the reports distributed to the different stations. As soon as the working of the organization thus tested had proved a success, and the correct and prompt receipt of the reports was no longer doubtful, it became a duty to provide in some way for giving notice of the approach of storms which the reports often heralded. The need for this duty was especially urgent upon the lakes. The first storm-warning was telegraphed and bulletined along the lakes on November 8, 1870.

In November, 1871, Professor I. A. Lapham, of Milwaukee, a meteorologist well known throughout the lake region, was employed as assistant to the Chief Signal Officer, and stationed at Chicago, with special reference to the supervision of the signal service on the lakes. His immediate supervision of this portion of duty ceased with the close of navigation.

The reports of Assistant I. A. Lapham, herewith (Papers 2 and 3) exhibit the character of his labors, their extent, and, to some degree, the results had from them. In addition to his duties in connection with the preannouncement of storms, this gentleman has prepared a series of valuable tables for this office.

In the early winter of 1870-'71 the efforts of the office were directed to the extension of the system of stations as rapidly as it was possible to supply them with observers and instruments.

On January 15, 1871, the stations on the east Atlantic coast were added to the list of those reporting.

The section from Chicago to San Francisco, including the station at Corinne, commenced reporting February 2, 1871.

The stations on the coast of the Gulf of Mexico, and in the valleys of the Ohio and Mississippi Rivers, have been established during the past summer.

The issue of the tabulated reports at the different cities was followed, with as little delay as practicable as the service extended, by an exhibition at the rooms of the boards of trade and chambers of commerce, or in other prominent places in the different cities, of weather maps, on which the meteoric conditions at the stations throughout the country were exhibited by symbols. In the "instructions to observer-sergeants," a copy of which is herewith, (Paper 4,) a full description of these symbols and their uses is given. Maps of this description are now displayed daily at forty-five of the principal stations.

Maps similar in style are exhibited in the office of the Chief Signal Officer, and, during the sessions of Congress, in the hall of the House of Representatives. The preparation of graphic weather-charts became next incidental to the receipt and consideration of reports from stations so widely extended. Charts of this kind were drawn to embrace the reports of the earliest dates.

The meteoric conditions were exhibited on these charts by printed symbols and figures for the readings of the instruments placed at each station. The graphic chart herewith (Paper 5) illustrates the character of these papers. It was desirable that copies of these charts should be furnished the different scientific institutions in the city of Washington and elsewhere throughout the country. The mode in which these charts are prepared is described at length hereafter.

The successful issue of these charts at Washington has led to the publication, under the direction of this office, of similar charts at New York, Philadelphia, Cincinnati, Chicago, and New Orleans. It is contemplated to extend the publication to other principal cities.

The organization of the telegraphic circuits, over which the reports are received at this office, and which permits the telegraphic meteoric information received at Washington to be at the same time communicated in the different cities, renders the publication of charts elsewhere easily practicable.

The popular attention was early attracted by these publications. It soon became evident that the popular will, as well as the views of eminent scientific men, required the publication of deductions of some kind had from the material received at this office.

The services of Professor Cleveland Abbe, A. M., assistant to the Chief Signal Officer, as meteorologist, were secured on the 3d of January, 1871, since which date he has been on duty in this office.

Professor Thompson B. Maury, A. M., entered upon service as assistant in the office June 18, 1871.

The issue of synopses and probabilities, as they are styled, was commenced by the office on February 19, 1871, and has been made thrice daily since that date.

The synopses consist of a synoptic view of the meteoric condition of the United States, as had from the data received at each regular report.

The probabilities are the deductions made by the office, from the data in its possession at the time of each report, as to the meteoric conditions probably to be for the eight hours then next ensuing.

Copies of these synopses and probabilities are furnished at the mo-

ment of their issue to the different press associations in the United States. They are also printed upon the graphic weather-charts issued by the office.

By the display of weather maps and bulletins, the issue of the graphic charts, the tabulated meteoric reports, and the synopses and probabilities, provision seemed to have been made for that publication of meteorological information at the different ports and cities of the United States with which the office had been charged. A popular attention to the subject of meteorology had been excited, and a popular instruction in some of the uses of the science was progressing rapidly.

It was deemed advisable to furnish, for general distribution, suggestions as to the practical use of the information so widely diffused, and to embody in a compact form some of the rules and generalizations bearing upon that use.

On August 2, 1871, the brochure herewith (Paper 6) was issued from this office. It was the object of this publication to put it in the power of the largest number to make use of, and to profit by, the labors of this office, and to afford the means by which at once to supplement, judge of, and aid the work of the Department. The paper has been widely distributed, and copies have been furnished the press, the boards of trade, and chambers of commerce, agricultural societies, and other associations whenever it has been thought the information it contains could be used to advantage.

Early in October, 1871, an examination of the experiments had daily for some months in the office, in the preparation of detailed synopses, on which had been indicated the times and places at which signals of caution or of safety ought to be shown, indicated that the office would be warranted in assuming to display cautionary signals at twenty ports on the Atlantic coast, the Gulf coast, and on the northern lakes. The period from October 1 to October 23 was devoted to giving proper notification of the points at which the signals would be displayed, their character, and their exact meaning, and to the necessary preparations at the different signal-stations.

The display of cautionary signals was ordered to be at the designated stations of the observer-sergeants on and after Wednesday, October 23, 1871, whenever such display should, in view of the meteoric information had at this office, be deemed necessary. Each signal is required to be ordered by telegraph from this office, and remains displayed until it is ordered down by the same authority.

The cautionary signal—a red flag, with black square in the center by day, and a red light by night—displayed at the office of the observer, and other prominent places throughout any city, signifies—

1. That, from the information had at the central office in Washington, a probability of stormy or dangerous weather has been deduced for the port or place at which the cautionary signal is displayed, or in that vicinity.

2. That the danger appears to be so great as to demand precaution on the part of navigators and others interested, such as an examination of vessels or other structures to be endangered by a storm, the inspection of crews, rigging, &c., and general preparation for rough weather.

3. It calls for frequent examination of local barometers, and other instruments, and the study of local signs of the weather, or clouds, &c. By this means those who are expert may often be confirmed as to the need of the precaution to which the cautionary signal calls attention, or may determine that the danger is overestimated or past.

The fact that no cautionary signal is displayed, or that it is ordered down at any station, indicates that there is no information in the possession of the office which would call for especial precaution at that station. The pamphlet herewith (Paper 7) gives at length the meaning and the uses of the signal. It is designed to furnish copies of this paper to every vessel of both the merchant and military marine of the United States.

The cautionary signal was ordered to be shown when necessary at the following posts, viz:

Baltimore.	Mobile.
Boston.	New London.
Buffalo.	New Orleans.
Cape May.	New York.
Charleston.	Norfolk.
Chicago.	Oswego.
Cleveland.	Portland, Maine.
Detroit.	San Francisco.
Galveston.	Savannah.
Grand Haven.	Toledo.
Key West.	Wilmington, North Carolina.
Milwaukee.	Jacksonville, Florida.

In addition to the exhibition of the signal at the ports named, the statement of synopses and probabilities furnished the press tri-daily has added to it the names of the ports at which the cautionary signal is at any time ordered to be displayed, and also the names of those at which, being displayed, it has been ordered down.

The display of the cautionary storm-signal had practical effect for the first time in the United States on the night of Tuesday, October 26, 1871, when the signal was ordered at 7 p. m. to be displayed at the port of Oswego, New York. The signal so displayed was ordered down at 1 a. m. on Friday morning, October 27.

The service of the cautionary signals has imposed additional labor upon the force at the different stations, by the fact that the station must be ready to receive the telegraphic orders at night as well as in the day. The details for the duty must be so arranged that the signal so ordered will be promptly and well displayed, and care had that it so remains while the need for caution is supposed to exist. The frequent calls for information which the exhibition of the signal always brings to the office of the observer, to which those interested are by public notice referred for such intelligence, must also be answered.

The character of the meteoric observations at the different stations, and the cipher in which the readings are transmitted, have remained as described in the last annual report of the office.

The organization of working-forms of telegraphic circuits, explained at some length in the same report, has proven capable of indefinite extension. Experience has confirmed the opinion last year expressed, and has shown that, with working-forms of telegraphic circuits properly arranged, meteoric observations taken synchronously around the globe could be as readily made available for scientific purposes as those of a continent have been. The working forms of circuit herewith exhibit those under which telegraphic service of the past year has been rendered.

The organization of circuits reported in the last annual report, and extending to those of the Western Union and International Ocean Telegraph Companies, continued in effect until March 4, 1871, when it was terminated on the part of the Western Union Telegraph Company in

sequence of misunderstanding as to the powers of the United States in relation to the telegraphic lines. These powers, as expressed in the act of 1866, secure to the United States precedence for the transmission of Government dispatches over lines which have availed themselves of the conditions. The act also imposes upon the Postmaster General the duty of fixing annually the rates at which such messages shall be transmitted. The sudden cessation of reports extending in their consequences to so many interests might have proved disastrous. The War Department, charged with the duty of collecting them, was placed in an unfortunate position. In this emergency the Franklin, the Atlantic and Pacific, and the Pacific and Atlantic Telegraphic Companies tendered their services promptly, and assumed the transmission of reports from all points to which their lines extended, with such effect that these companies receiving notification of the requirements of the service only at 10 a. m. on March 5, a sufficient number of the regular reports were received over their lines the same day to permit the usual press-report to issue from this office that evening. The International Ocean Cable Telegraph Company continued its service for the Department without interruption, and with a spirit of accommodation.

The subject of the relation of the United States to the telegraph companies being brought, by the Secretary of War, to the attention of the Attorney General of the United States, was by him placed in immediate charge of the Hon. William Whiting, assistant to the Attorney General of the United States. There could be, in the view of this officer, little question as to the rights or powers contemplated by the law. Several conferences, in which officers of this office took part, were held with the representatives of different telegraph companies, the conferences being in New York and at Washington. These meetings resulted in a satisfactory adjustment of all questions between the United States and the telegraph companies, both as relating to the special duties of the signal service and the general telegraphic business of the United States. The conclusions are exhibited in the paper, (Paper 35,) and in the order of the Postmaster General, (Paper 36,) who has paid this office the compliment of accepting as just the rates recommended by it. The relations had at this time with the telegraph companies of the United States are satisfactory. Embarrassments, however, arise, which, in the main, cannot be remedied until the United States secures, by some arrangement, the absolute control of the lines extending over its territory.

The working-forms of circuits herewith are made for the Western Union Telegraph Company, the Northwestern Telegraph Company, the Montreal Telegraph Company, and the International Ocean Telegraph Company; the former being the only companies possessing facilities for cutting so many parts of the continent with an organization of working so minute, and the latter controlling the cables to Key West, and holding by its wires and privileges the United States termini of the West Indian cables. The wires of these companies enter the telegraphic rooms at this office, and afford, if necessary, communication over almost any line within the United States; the failure of one line being thus to be made good by the employment of another. By such connections, telegraphic communication can be extended wherever telegraphic lines are in operation throughout the world. Of the service of the lines upon this continent, the Secretary of War has had illustration in his inspections of this office. As a single example, reports were called for on these occasions, and replies were received in a total time of eight minutes for the transmission of the message to and from San Francisco, Cali-

fornia the working being over a single circuit of three thousand four hundred and seventy-six miles in length.

It is a fact illustrating the rapid extension of telegraphs throughout the world, that from this office can be had to-day communication by lines of telegraph reaching by their connections the coast of the Pacific on the west, and extending eastward to the eastern coasts of China and Japan.

The one link of the Pacific cable is wanting to girdle the world. Northward the lines reach those of the Canadas and British Possessions; southward they connect the West Indies and stretch toward South America. The advantages yet to result from a proper connection of the telegraphic system everywhere with systems of meteoric report can be contemplated in imagination only.

The telegraphic service of this office has been under the immediate supervision of George C. Maynard, esq., electrician, by whom it has been skillfully conducted.

The subject of a cipher, by which to further condense the telegraphic reports, has continued to receive attention. It is contemplated to commence, so soon as careful experiment shall have proved it practicable, the use of one prepared in this office, by which it is hoped the character of the reports will be improved without increasing the expense of transmission.

During the past year applications have been made by boards of trade of cities in the river valleys to have added to the telegraphed bulletined reports of the signal service a telegraphed report of the rise or fall of the greater rivers. An examination of this subject, showing that, by the addition of two words per day to a single one of the cipher reports already had from the river stations, the requisite reports might be given, and that the expense of the necessary apparatus will be trivial, it is proposed to embody this information with the reports, as having a direct connection with the meteoric information they already contain. During the eleven months ending September 30, 1871, the aggregate number of words of regular weather-reports received at the office of the Chief Signal Officer in Washington was five hundred and sixty-one thousand nine hundred and twenty-nine, and the total number of words that was transmitted during the same period over the several circuits amounted to one million seven hundred and fifty-nine thousand nine hundred and fifty-two. These numbers do not include the service messages and other telegraphic business of the office, which would swell the gross amount to about two million words. Tables 6, 7, 8, 9, and 10, herewith, give the service in detail.

The subject of the study and consolidation of the reports daily received at this office, and the preparation of deductions to be had from them, has been under the immediate and able supervision of Professor Cleveland Abbe, A. M., assistant. This officer has devoted himself to these duties and to others of the most onerous description with rare fidelity.

The favor with which the Synopses and Probabilities issued by the office have been received, and the commendatory expressions of scientific meteorists, sufficiently evidence the skill with which he has discussed the mass of material laid before him. This officer has rendered very valuable assistance in the preparation of the publications of this office—the circulars in relation to the practical use of meteorological reports and weather-maps issuing from it. It is believed that some of the rules and generalizations contributed by him to these papers are now for the first time announced. (Papers 6 and 7.)

The services of Professor Thompson B. Maury, A. M., have also been employed as an assistant in this Department. A series of meteorologic



charts, synopses, and probabilities has been prepared for file in this office by assistant Maury.

First Lieutenant Robert Craig and Second Lieutenant A. W. Greely, acting signal officers, United States Army, have been employed upon the studies and in the preparation of the charts and papers necessary to fit them for duties in connection with this service.

The system of synchronous reports, and their regularity, has afforded unusual facilities for the study of the atmospheric conditions of the continent, and the changes incident to the different conditions.

During the year the reports received at the office of the Chief Signal Officer tri-daily, commencing with those of November 1, 1870, have been charted, three charts, one for each report, being draughted for each day.

The meteoric condition at each station, and the isobars for the United States, are exhibited on these charts. Accompanying each has been a synopsis of atmospheric changes and of the atmospheric conditions for the twenty-four hours preceding the hour at which the chart is timed, and a deduction then had as to the changes probably to follow.

A practice for the duties which the office contemplated as necessarily to be discharged, by the display of signals, has been had by the draughting, in tabular form, thrice daily, a detailed synopsis, which relates to designated sections of the country, and enumerates the points at which a cautionary signal might be properly exhibited. It has been only after the comparison of these sheets with the results had from the reports collected at this office has seemed to justify the display of cautionary signals, that the responsibility of ordering such display has been assumed.

There have thus been drawn and filed in the office of the Chief Signal Officer one thousand and ninety-five charts. The studies of each are drawn upon the face of the chart in such manner that the photographic copies of the charts alone, bound into volumes, will give a meteoric record for the United States perhaps not paralleled in kind by any before made. The securing of such a record, the establishing by practical example how meteorological reports may be taken over regions, no matter how extensive, and how telegraphs may be organized to transmit such reports, would, of themselves, have made fair return, had there been no other for the appropriation expended. In the preparation of the charts referred to, the course of more than three hundred areas of high barometer, and of about the same number of areas of low barometer, have been traced with the attending changes of weather.

From January 19, 1871, to November 1, 1871, eight hundred and forty-six detailed sheets of synopses have been tabulated to accompany sheets exhibiting the changes of weather deemed probable for the succeeding day. Papers 38 and 39 exhibit the plan of this work.

Press reports of the general synopses and probabilities, as they are styled, have been furnished the press, as heretofore mentioned in this report. The wide diffusion given these reports by the relations the office has established with the press is evidenced by the fact that it is estimated, computing the number of copies published at each edition of each newspaper in which reports or bulletins have appeared, the aggregate number of copies of the reports furnished from this office, which have been laid before the public, has reached a total of sixteen million. This extensive publication has been without cost to the United States. It is computed that in the morning editions of the New York newspapers alone, two hundred thousand copies are thus distributed daily. In addition to these press-reports, special reports are occasionally requested by ship-owners and others, and have been furnished. The Memphis

Board of Trade recently applied for special reports during the meeting of the Agricultural Fair in that city.

As instances of particular storms described in their course from day to day in the general reports from this office, may be cited those of November 22, 1870; February 5, March 9, May 9, August 16 and 22, September 27, and October 12, 1871.

The comparison of the forecasts of the weather, or "probabilities," as they have been styled, deduced from the study of the relations of each regular report to those which have preceded it, together with the meteoric conditions reported as actually existing over those sections of territory to which the "probabilities" have referred, has shown that of the predictions 69 per cent. may be held to have been fulfilled. A higher percentage of verifications results, if allowance is made for the meteoric changes that may have occurred within an hour of the times stated in the predictions. The percentage of such partial verifications is considered to be one of about 21 per cent.; the total of verifications and partial verifications being thus in the proportion of ninety to each one hundred of the predictions announced. It is not deemed advisable that the partial verifications be considered for any practical purposes. It is proper, therefore, to limit the official claim of the office to the fact that 69 per cent. of the forecasts made of record, and published by it, have been verified. It will be the aim of the office, with improved organization, larger experience, and established facilities, to increase this proportion.

It must be remembered, in apology for the failures, that the duties of the signal service require very rapid action. The reports are no sooner received at this office at the time of each reporting than they must, to meet the demands of the press for speedy publication, be discussed, the deductions made (written out in form) and telegraphed to the different cities in a period of time limited by minutes. Thus the midnight report is made from observations taken at 11.35 p. m., (Washington time,) at stations on the Pacific, in the interior of the continent, in the Mississippi valley, throughout the States east of the Mississippi, upon the Atlantic and Gulf coasts, and upon the shores of the northern lakes. These reports must be concentrated at Washington, consolidated, the deductions made and reported at 1 a. m., at which exact hour the press-report is telegraphed from this office. The average time from the moment at which the observations are made at the stations, near and distant, to that at which the results are reported and telegraphed to the press, after they have been received and discussed at this office, has been eighty-five minutes.

An advantage is had in the fact that the reports to be issued follow each other so rapidly—the greatest interval being nine hours—each may be regarded rather as a supplement of the one that preceded it than a solitary report to be made complete from a single series of data.

Especial attention has been given by the office to the subject of the accurate reductions of the barometric readings (observations) made at the different stations to the hypothetical readings at sea-level.

A series of tables for this purpose has been prepared by Professor I. A. Lapham, assistant. A second series, to be made by methods original with Professor Abbe, assistant, is in course of preparation. The tables will be prepared for all the stations.

In this connection it is proper to refer to a difficulty encountered, which extends in its effects beyond its mere relation to the correctness of the meteoric observations.

The altitude of the different stations above the sea-level ought, of

course, to be accurately known. In some cases the exact and satisfactory determination of the elevations are not to be obtained. The altitudes of the different signal stations of observation, once properly determined, the barometrical observation had at them becomes a reliable basis to which to refer hypsometrical observations had in reconnaissances, surveys, or exploring expeditions. In view of the importance of this subject to all interests of internal improvement, of railroads, canals, &c., the institution of a system of accurate levelings to those stations to which they are needed seems warranted.

A station of observation has been maintained since December 15, 1870, at the summit of Mount Washington, at an elevation of 6,290 feet above the sea. The occupation of this summit for meteoric observation in winter was urged by Professor C. H. Hitchcock, State geologist of New Hampshire, and for a portion of the time during the past winter it was occupied, in common with a party there stationed under his directions, by an observer-sergeant of the signal service making the observations for his office. Since June the station has been occupied by the observers of the signal service alone.

The observations made in the higher aerial currents are of especial value in relation to some of the duties of practical meteorology. It is desirable that other mountain stations should be established, and similarly provided, along the Apalachian Chain, as at the Black Mountain, South Carolina, White Top, Virginia, and others to be selected, and that these, together with certain special stations on the western plains, should be provided with self-registering meteoric apparatus.

It has been the aim of the office to extend its system of synchronous reports, collecting the material for future studies by observations made at the same hour, wherever there has been the opportunity to reach by exploring parties or expeditions distant points, or those of the meteorology of which little is known. With this view, at the request of Captain C. F. Hall, commanding the *Polaris* and North Polar expedition, and with the approval of the Secretaries of War and of the Navy, an observer-sergeant, equipped with carefully selected instruments, was detailed to accompany the expedition. One series of observations to be made by this observer, will be, so far as practicable, synchronous with those on that day making at the different stations in the United States.

It is deemed desirable to secure reports of observations from some points, as Pembina, Sitka, the Sandwich Islands, which as yet can be reached only by mail.

It is proposed to give a still wider extent to the synchrohal system of observations upon the ocean, by seeking the assistance of intelligent ship-captains and others making voyages at sea who will be willing to make the observations at the designated times. A form of "log," or record, (Paper 37,) has been prepared for such use. Though these observations may lack the certainty of those officially made, their value, as supplementary to the regular reports on land, will be readily appreciated by meteorists. The observers will receive copies of the publications of this office.

With the rapid extension of telegraph cables, and the results of a years' experience in the concentration of telegraphic reports, the idea of national systems of isochronal observations, to be internationally interchanged, referred to in the last annual report of this office, seems easy of realization. It is already certain that, to complete the system of the United States, stations of observations should be had in the West Indies, on the Windward Islands, and at tropical stations in South America.

The international co-operation of Spain, England, France, and Denmark is needed for this purpose. So far as the service of the United States is concerned, the co-operation to be thus desired need extend only to the assent to the establishment of the stations and the transmission of the cipher report. An ample return for this much of courtesy can be proffered in the furnishing to the governments named copies of the observations made for the service of the United States, to each of which they are of value.

The benefit to accrue to all commercial interests when, at the principal ports of any coast, the meteoric conditions can be found announced for all that coast, (as now in the United States,) or even for the transoceanic coast, need not be commented upon.

In anticipation of such uses for meteoric knowledge, it seems proper to invite attention to the aid to be had in making them practicable by the services of the officers of the Army and Navy, and to express the hope that, in the courses of the military and naval schools, at West Point and Annapolis, some study of meteorology may have place.

It has not been possible to carry into effect the plan of a model observatory, at which the different varieties of self-registering and other meteorological instruments might be compared and tested. The contracted building in which the office has been located, has not been suited in any part of it for the purpose. The project has not been abandoned. Standard and ingeniously devised instruments have been procured from Europe and from meteorologists in the United States. Arrangements have been made by which an instrument-room, to answer sufficiently well a temporary purpose, will be had. It is contemplated to mount all the instruments which have been proved, together with such as may be invented and come to the attention of this office, in this room, for the study of their peculiarities and to test them.

The opinion last year expressed as to the great value to the United States of the records to be made by self-registering instruments properly placed, as, for instance, at the capitol city of each State, remains unchanged. It is eminently proper that facilities for the best study and use of instruments be had.

A properly devised and constructed observatory building, and one so located as to be free from local disturbances, as at some point in the public grounds, will, it is probable, be ultimately needed for such purposes. The expense of such a structure would be trivial in comparison to the advantages to be derived from its use.

The great fires in the Northwest, at Chicago, and in the northern parts of Wisconsin and Michigan, have afforded an opportunity for inquiry, whether any theories of meteoric effects were to be established by them. It is probable that burnings upon a similar scale will not again occur in this country.

Professor I. A. Lapham, assistant, has been requested to examine and report minutely upon the subject, visiting, if necessary, the scenes of the conflagrations.

A valuable paper has been already prepared by him upon the relation of such fires to the formation of prairies. Subjects of this nature having an important bearing upon agricultural interests are, by the necessary duties of the office, frequently brought under consideration.

The very general expectation of agriculturists that, in some way, the duties of the office in reference to the approach and force of storms would be made to contribute to their interests, has found frequent expression in letters and communications from societies and associa-

tions. It has been the desire of the office to comply with the wishes of a class so eminently entitled to consideration as the mass of the intelligent farmers of the country, in so far as was practicable without any diversion of the duties of the office. For this purpose the circular papers 40 and 41 were prepared and have been issued. Copies of all meteorological bulletins and the weather-charts of the office are furnished the Bureau of Agriculture. The reports necessarily collated in the publications of the office, such as the bulletins at the stations and the press reports—and these latter reach points as well in the interior as upon the coasts—are sufficient of themselves to enable farmers, as well as other classes, to better judge of the probable weather than they have been able to do at any time previous to the issue of such reports.

This incident benefit was not contemplated at the commencement of the service, and the reports were not drawn to produce it. It seems probable that if the means were available for increasing the number of interior stations, a corresponding increase of advantages would accrue to the inland interests, while a greater certainty of protection would be had for the coasts with every addition of stations. The number of stations ought to be largely increased.

[A record is given, alphabetically, of the stations of observation under the direction of this office:]

The number of bulletins and maps issued daily at this office varies, but will average not far from thirty-five of the former and sixty of the latter. The maps contain all the matter of the bulletins and also the synopses and probabilities prepared by Professor Abbe. The Associated Press agents and the daily papers are furnished with the three synopses issued daily. The Sunday weekly papers are also supplied. Bulletins are posted in the signal office, at the post-office, and at the main office of the Western Union Telegraph Company, and maps in all of the principal hotels; three large weather-maps are hung in the signal office, on which the weather at the different stations throughout the country, as given at the three daily reports, is indicated by proper symbols. These are changed regularly, and a glance at the maps shows the state and changes of weather for twenty-four hours. The office is kept open continuously, and the men divided into day and night reliefs. Elevation of barometer above sea-level 90½ feet.

In addition to the standard instruments used at all stations, and which are compared here, several varieties of self-registering instruments are being tested and will be described in another part of this report. The manner of printing the map issued daily is quite novel in many of its features and deserves a detailed description.

Previous to May 1 maps of the observations were printed by the "manifold process;" since that time a press has been used which has been found to be far superior to the "manifold." An ordinary "proof-press" is used, with a bed plate, in which square holes are made, coinciding with the stations on the map, in which are placed the symbol type to designate the weather and direction of the wind. The arrows for showing the direction of the wind are diagonal on some of the type, and cross-wise on the rest, making them available for pointing in eight different directions, and fitting so closely in the holes as to prevent their pulling out by the ink-roller; close to each of these holes is cut a slot, in which is set the figure types showing in regular order, first, the height of thermometer, next, the barometer, and, lastly, the velocity of the wind. These are printed in red ink on the black base chart of the United States, the contrast in color rendering them clearly perceptible

at the same time is set up and printed, in the southwest corner of the map, a table showing opposite the name of each station the change of barometer in the last eight hours, change of thermometer in the last twenty-four hours, relative humidity of the atmosphere, and the amount of rain-fall in the last twenty-four hours. Adjoining this table is also printed at the same time the "synopsis for past twenty-four hours," and the "probabilities," making a complete meteorological record for the day.

Provision has been made against the interruption of the reports, in case of the destruction of this office by fire, by the provision of a duplicate office, to which, in the contingency of such disaster, the telegraphic connections may be at once made, and from which the usual issues of the office in maps, the general press-reports &c., could be had without delay.

The charge of stations and of reports has been under the immediate direction of Brevet Captain H. W. Howgate, United States Army, acting signal officer, and assistant, by whom the diverse duties of such a charge have been ably conducted. To the rare fidelity and energy of this officer the successful management of the past year is largely due.

The total number of observer sergeants on duty at stations is 83, and of privates acting as assistants is 40.

In connection with the equipment of these stations the thanks of the Department are due to the Post-Office Department, which has taken upon itself, under the especial order of the Postmaster General, whenever requested, the duty of transporting in care of its mail agents the barometers needed to supply the places of those rendered useless by accident. This service, an unusual one for the Post-Office Department, and requiring great care, has been rendered with invariable success.

The care of the correspondence, papers, and publications of the office necessary for the management of the various duties at Fort Whipple and the stations of observation so widely extended, together with communications with the press, with scientific and other associations, and with individuals scattered throughout the country, is one of magnitude. Table 11, herewith, affords the data of description and of the extent of the labor. The total of papers sent and received by mail has reached an aggregate of 90,514.

Captain Garrick Mallery, first United States Infantry, brevet lieutenant colonel, United States Army, acting signal officer and assistant, has had charge of the general correspondence and records of the office, and has rendered especial and very valuable service.

The duties of the observers at the stations have been already reported to the Secretary of War. The forms appended to this report, and which, in order to systematize labor, are those required to be used and filled by them, sufficiently illustrate the details of the service.

The fact that each observer reports thrice daily by telegraph, at hours fixed to the minute to this office, by the reports he renders, which he is required to present in person at the instrument in the telegraph-office at his station, and on the accuracy of which the neighboring reports are a check, would suffice to secure good conduct, if the character of the men was less high than it is.

There is an additional guard against laxity in the fact that both operator and sergeant are called to an account and at once by telegraph for any missing report, and both are called to correct any manifest error. Neither is willing to be blamed for the carelessness of the other, and each is prompt to fix the fault where it belongs. Each regular general report is in effect a telegraphic roll-call of the stations spread over a continent from the Atlantic to the Pacific and from the northern lakes to the Gulf

and the Caribbean Sea. This roll is called in the morning, in the afternoon, and at midnight, at fixed times, and each call must be answered.

In the year of duty now reported, the failures have been of the fewest. There are none which the records of this office fail to give, either the circumstances which excused them, or the censure or punishment of the observers.

The promptitude, regularity, and steadiness with which the stations have been served, have evidenced the wisdom of the act of Congress which placed the service under military control. A rigor less than that of military discipline could not have secured that strict obedience to orders which has been necessary.

The system, as arranged, is capable of indefinite extension. It would be as easy (telegraphic facilities given) to call the roll of stations around the world as of those from New York to San Francisco. In addition to this daily supervision, the condition of the station is assured by regular inspections made personally from time to time by officers instructed for the purpose. The form of inspection (paper 42) exhibits the subjects which come under attention. Two inspecting officers are at this time making a tour of the stations. Since June 15, 1871, twenty-eight stations have been inspected.

In the review of the duties of the past year the Chief Signal Officer finds reason to commend the officers, non-commissioned officers, and men of the signal service for a faithful discharge of duty. Their services have been rendered with a zeal and pride, of which the results are given in the statements above submitted. They are subjected to hardships which it is proper to mention. No branch of the service requires better men, more careful especial instruction, or greater fidelity to duty. There is none involving greater responsibilities. The details for the service are, however, wholly temporary. It is just that the position of the observer-sergeants should be fully recognized, and the hope of promotion to be had by faithful discharge of duty be given the deserving. Until this is effected by law, it is recommended that an appointment to a commission be given each year to that sergeant who shall in that year be reported as most distinguished for fidelity and ability.

The need of permanent appointments in the office of the Chief Signal Officer for the now very extensive duties of the Bureau, is pressingly felt. In no branch of duty is more careful selection needed, and in none does long experience render better results. There is no branch of the service of equal importance but for whose duties the officers are permanently commissioned, and can therefore attempt improvement in view of a study and practice which may be life-long.

The care of the Secretary of War has provided for the past year that permanence for these duties to which the success of the office has been largely due. The appointments ought to be lasting.

A year ago the duties of this division could be reported only as a statement of intentions rather than of facts. In the period which has since elapsed a mass of facts have accumulated, and results have been attained, of which there is herewith a rehearsal in outline. It has been a service which has no holidays and can know no rest: the labors of which continue equally throughout every night as well as every day, and to the vigilance of which has been intrusted responsibility extending not only to property but possibly to the life of any citizen of the United States. The appendixes to this report will illustrate the character and the details of the plans adopted; the descriptions of stations, and of the telegraphic arrangements by which the work at each is made available; the aggregate of reports, papers, &c., stated in numbers, indicate the

extent of the service. Sufficient data of the times employed for especial portions, of each day's duty, exhibit the effectiveness of the organization provided. Some of the generalizations to be had for scientific purposes from the information collected are given in the circulars annexed. The publications contemplated to be made hereafter from time to time will submit, for the study of scientific men, the facts on which the office has been compelled to act from day to day. It has fallen to this Bureau to take the responsibility of originating, and to hazard erroneous action rather than not to act at all. The results, have been fully as favorable as were anticipated. At the end of the first year the service can be reported with a working organization practically tested, and discharging, with some success, all the duties contemplated for it by Congress. It has been everywhere welcomed with the recognition of the utility of its purposes. The scientists of foreign countries and the scientific institutions throughout the United States have proffered expressions of good will, and have rendered assistance. The chambers of commerce, boards of trade, agricultural societies, commercial associations, and the public press, to all of which so much was due at the outset, have continued to give the aid of their support, and have suggested improvements when these seemed to them practicable. It has been owing to such encouragement and assistance, to the interest the Secretary of War has manifested in this branch of his duties, and that faithful labor of the assistants in this office which has made the care of the Chief Signal Officer supervisory only, that he is enabled to report this progress.

I am, sir, very respectfully, your obedient servant,

ALBERT J. MYER,

*Brigadier General, and Chief Signal Officer of the Army.*

Hon. W. W. BELKNAP,

*Secretary of War, Washington, D. C.*

## REPORT OF THE SUPERINTENDENT OF THE MILITARY ACADEMY.

HEADQUARTERS UNITED STATES MILITARY ACADEMY,

*West Point, New York, November 14, 1871.*

SIR: In compliance with your letter of the 7th instant, received on the 11th, I have the honor to forward the following brief report of affairs at the Military Academy for the past year, and of the informal character authorized by the letter.

The report is not so comprehensive or so much in detail as could be desired, but as much so as I have, in the short time taken, been able to make it.

First. For a report as to *personnel* of the Academy, attention is invited to the tabular statement annexed.

Second. Public buildings and improvements.

The public buildings are generally in a good state as to repairs. The sum asked for in the estimate forwarded in September last will meet all requirements for repairs.

The repairs to the cadet barracks are completed.

The new fire-proof building for records and offices is substantially finished. No further appropriation will be necessary on this account. The roads and grounds are in good condition. The south wharf, of which the covering is beginning to decay, will require new planking by the time the appropriation asked for on that account shall be available.



Whatever improvements are made should be on a comprehensive plan and with a view to future necessities.

The following improvements should, I think, be made so soon as can consistently be effected. Most, of course, I have no expectation will be soon seriously considered, and are only indicated as showing what I think should be had in view relative to future estimates.

Under the present system of appropriations, by which unexpended balances revert to the Treasury, and the means at disposal here for economical use of labor, but one or two works of much magnitude can be suitably prosecuted at the same time. In my estimate forwarded in September, owing to my limited experience here and for certainty as to necessities, I confined the estimate to the usual current and ordinary items and such incidental and miscellaneous items as usual or of apparent necessity. Such estimate I hope will meet approval.

#### IMPROVEMENTS.

A system of sewerage should be completed as soon as appropriations can be had. The estimate for coming year contains an item for survey and estimate for sewers.

A few years would suffice without requiring any large appropriation. The hospital reports show an apparent good sanitary condition, but it cannot be expected to continue indefinitely under the present system of cesspools and surface-drainage.

The present academic building should be made fire-proof. This building contains nearly all the valuable collections and appliances of the different departments of instruction.

A cavalry barracks should be built near the present cavalry stable. The barrack now used by the cavalry detachment would then no more than supply quarters for enlisted men, who have been permitted to sleep off the post for want of quarters.

The present gas-works are not of sufficient capacity, and will require replacing or enlarging within a few years. An appropriation for this purpose, made in 1868, lapsed into the Treasury under the act of July, 1870.

A suitable carpenter-shop and a blacksmith-shop, to replace the temporary structures, which are little more than sheds, now used, should be built as soon as convenient.

A store-house for coal is necessary, an estimate for which is included in estimates made in September last. In the same estimate is included amount necessary to build an ice-house for preservation of perishable stores, in warm weather, for the cadets' mess.

There are many small wooden buildings in the quarter of the post commonly called Camptown, used mostly as quarters for enlisted men who are married. These buildings are mostly old, and will become, in a few years, unfit for use. It will, for reasons of ultimate economy in the comparatively less expenditure necessary for repairs, police, discipline, and better sanitary conditions that can be attained, be best, in place of rebuilding and keeping in repair so many small buildings, to build, from time to time, as may be necessary, suitable permanent buildings. The cost will be less in the end, and the conditions for police, &c., will be much improved.

The water-supply the summer before the past was not adequate. An appropriation for survey and estimate for bringing water from Long Pond, four miles distant, is now on hand. No survey has yet been made. It is certain that the cost of bringing water from Long P.

would be large. A sufficient supply, from means within present control, can, I think, be had on the reservation, certainly for all uses except for flushing sewers. For sewers, when constructed, water could, if found necessary, be pumped from the river at no more expense than would be required to pump water from Long Pond over an intervening ridge of fifty or more feet, as would be necessary. It may eventually be necessary to bring water from Long Pond, but there seems no present necessity.

The chapel is too small for accommodation of cadets and visitors and others who at times attend. Should a new chapel be built, the present building could, with little expense, be fitted for other necessary uses.

For most of the improvements mentioned special appropriations would of course be necessary. Should the amount asked for the next fiscal year for repairs and improvements (the same granted for the present year) be continued for several years, considerable could be done from this source. The necessary shops might be erected, the system of sewerage gradually carried out, and the wooden buildings in Camptown be gradually replaced by permanent buildings.

With reference to the public property I would respectfully invite attention to the necessity for a good steam fire-engine in place of the one now here. There should, owing to the distances between parts of the post, be two engines, one to be kept near the barrack for enlisted men below the hill, and one at the cadet-barrack engine-room. Requisition for money on the Quartermaster's Department, for purchase of such engines, was forwarded a few days since.

#### THE DEPARTMENTS OF INSTRUCTION.

The philosophical department is not fully up in appliances with the present condition of the science. The defect will, to some extent, be remedied if estimates for that purpose presented are granted. Estimates for necessary models and apparatus will be asked for as shall be expedient. The professor of this department will need no urging to make it all that is desirable in respect to appliances.

The observatory, in addition to its use in the instruction of cadets, and for such work as the professor and instructors can find time for, independent of their duties, could, without interfering in any way with the instruction of cadets, be used if officers could be detailed, say young officers of engineers, in connection with their tour of duty with the engineers, battalion, and school, for making and recording continued observations.

#### THE DEPARTMENT OF ENGINEERING.

In this department some suggestions will, so soon as the professor recently appointed has time to fully consider the requirements of his department, be presented for consideration of the Secretary of War. Professor Mahan, previous to his death, was engaged on a revision of his Civil Engineering, used as a text-book. Such revision is necessary, and will be completed by Professor Wheeler. The instruction in military engineering, particularly of practical engineering, can be made of more practical value and more thorough than has recently been the case. Attention in connection with this department is invited to remarks on that of drawing.

#### THE DEPARTMENT OF LAW AND ETHICS.

The professor of this department, as now provided by statute, is also chaplain of the Academy.

Better results would, I believe, be attained if the chaplaincy were severed from a professorship. In such case the pay of chaplain should be made sufficient to insure a man of ability as chaplain. It would be best, also, that the position be not necessarily permanent.

#### THE DEPARTMENT OF DRAWING.

It is my opinion that the department of drawing, as such, should cease with the functions of the present professor. Consistently with other requisites to the education of an officer, to learn indifferently to execute pencil-sketches and water-colors, which is the general result attained, is not commensurate with the time required therefor.

All the drawing necessary to an officer's education can be taught in connection with the course of engineering, as is now nearly the case, with the exception of topography. Some time would then be disposable for more necessary instruction.

#### DEPARTMENT OF SPANISH.

The time now allotted to this study is not sufficient for thorough instruction. There seems to be no more time than can well be assigned. The study of Spanish is of practical value to our Army, but I believe that of "English studies" to be more so, and if it is a question of choice, English studies, at least grammar, including composition and geography, should have preference over Spanish.

The question whether English studies, at least English grammar, including composition and geography, shall form part of the course of instruction, I think worthy the careful consideration of the Secretary of War. I believe it should form part of the course, even if place has to be made at the expense of other branches. Such course could be assigned to the professorship of law and ethics without overburdening that department. The results, so far as I have been able to learn from observation and inquiry, hoped to be attained by raising the standard for admission, particularly for English grammar, geography, and history, in which candidates admitted are supposed, practicably at least, to be qualified, have not been realized.

The following table shows the number of rejected candidates for five years, including the present, with per cent. of rejected to whole number nearly enough for any inference pertinent.

	1867.	1868.	1869.	1870.	1871.	Total.
Arithmetic	8	16	9	29	15	77
Geometrical	9	24	16	25	24	128
Geography	8	17	11	41	15	92
History	10	18	13	40	22	103
Reading	2	8	4	16	3	33
Writing	15	12	11	31	10	69
Orthography	10	12	13	31	10	76

Percentage of appointments rejected by academic and medical boards, (no great proportion due to medical rejections:)

1867	23.16
1868	29.13
1869	27.92
1870	50.00
1871	35.34

It would ordinarily be supposed from the relatively large number of rejections for deficiency in grammar and history, that not only a good degree of proficiency in those branches had been attained by those accepted, but that a corresponding greater degree of attainment in other elementary branches would result. But such in fact is not the case. Practically, to require proficiency in English grammar of candidates, would result in the rejection of much the greater portion. Such was the case as to the candidates examined in September last, (I was present at the examination,) and from what I learn is usually the case. As a practical question, a very indifferent knowledge of elementary English branches must be accepted as a necessary qualification to an officer's education, or else such studies should constitute part of the course of instruction.

Competitive examinations and appointments for some time beforehand, as now for the greater portion of classes is the case, will have some beneficial effect, but not essentially meet the case.

To many the year's preparation only enables them to gain admittance under the present standard.

The degree of studiousness of cadets is fair, and, if anything, improving.

The sanitary condition is good.

Police of the post is good.

#### DISCIPLINE.

The general conduct of cadets is commendable, so far as I am able to judge from the short time I have been on duty. There is, however, apparently, more carelessness with regard to observance of regulations than should be the case.

This, I think, can be easily corrected, and good results otherwise had from a reasonably strict adherence to the regulations of the Academy regarding demerit.

Recent action in regard to cadets engaged in interfering with new cadets will have a very salutary effect.

In this connection I would suggest the propriety of legislation authorizing, subject to control of the Secretary of War, the superintendent of the Academy to order courts-martial, having all powers of a general court except sentence of dismissal, the proceedings to be complete with the approval of the superintendent, subject, of course, to revision by the Secretary of War.

The promptness with which offenses not of the gravest character could be dealt with would have a good effect, and as much from the knowledge that such power pertained to the authorities of the Academy as from its actual exercise.

#### REVISION OF THE REGULATIONS OF THE ACADEMY.

A revision of the regulations is desirable. Should it meet approval I would like to submit suggestions relative to such revision, but would prefer not to do so, unless necessary, for some months to come. If there is probability of any legislation likely to affect the regulations, it would be well, on that account, to delay until after the coming session of Congress.

#### MISCELLANEOUS.

First. I would respectfully invite attention to the propriety of *requiring* a deposit with the treasurer of the Academy from candidates for admission

of one hundred dollars. The accounts show that cadets who leave the Academy before the close of the first year after admission, who make a less deposit, usually leave more or less indebted. It has been customary to date discharges of those found deficient in studies sufficiently far ahead to cover indebtedness, otherwise the loss to the cadet commissary department and cadet mess would be so considerable as to require an increase of prices to all cadets to cover the loss.

Second. By the law now in force, the appropriation for expenses of the board of visitors is for board and lodging.

By an examination of accounts it appears that the actual cost is at about the rate of nine dollars per day while in attendance here, and eight cents a mile mileage to each member. The law in force was so worded, I suppose, on the supposition that compensation as such should not be paid members of the board of visitors. A per diem allowance would remove any doubt as to what should be included under the head of board. The construction has necessarily been rather liberal.

Third. I would invite attention to the subject of compensation to cadets, mostly of the present third class, for losses by the fire at the cadet barracks last winter. Such losses occurred while the sufferers were engaged under their officers in efforts to extinguish the fire. Compensation, if made, should, I think, be confined to articles obtained from the cadet commissary, clothing and books.

The proof as to articles would be, for the most part, the affidavits of the cadets concerned; the values could be fixed by the cadet commissary prices. I will forward statement of names and amounts as to individuals in a few days; the whole amount of loss, of the character specified, would be about \$5,000, I think.

Very respectfully, your obedient servant,

THOS. H. RUGER,

*Colonel Eighteenth Infantry, Superintendent.*

## REPORT OF THE BOARD OF VISITORS.

WASHINGTON, July 1, 1871.

SIR: It is proper, in transmitting to you the accompanying report of the Board of Visitors to the Military Academy for the present year, that we should explain the fact that only seven members of the board have affixed to it their signatures.

At the conclusion of our labors, several members of the board were absent. The Hon. L. D. Campbell, of the House of Representatives, was not at any time in attendance. His colleagues, the Hon. Mr. Hawley and the Hon. Mr. Burdett, and likewise the Hon. O. P. Morton of the United States Senate, were unable to remain until the close. General Quimby, the secretary of the board, was suddenly summoned from its sessions by serious illness in his family. The voluminous testimony taken by the committee on the subject of discipline requiring the service of a stenographer, could not be prepared in time to be submitted to the board before its final adjournment. This testimony has been sent by our direction to Senator Carpenter, the chairman of said committee.

The members of the board representing the Senate and House will doubtless, in performance of their further duty, make a report to Congress and present the testimony upon this subject.

Of the seven remaining members of the board, only four, as you will

perceive, affixed their signatures to the report without qualification. The minority did not deem it advisable to draw up a separate report upon the topics which divided them from the majority, but have been content for the present to except to the portions indicated opposite their names.

We sincerely regret the want of unanimity in our conclusions, and all the more so, since our personal relations were throughout so full of pleasure and our parting one of unfeigned mutual respect.

But if the unanimity of former years is wanting to this report, you will do us the justice to believe that we have each been actuated by independence of thought and honesty of conviction.

Most respectfully, your obedient servant,

B. SUNDERLAND,  
*President of the Board.*

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WEST POINT, *June, 1871.*

SIR: The Board of Visitors to the United States Military Academy at West Point, New York, for 1871, have the honor herewith to submit their report.

The board met at the time and place designated, and, being duly organized, entered upon their labors. They were first introduced by the Superintendent, Brevet Brigadier General Thomas G. Pitcher, to the academic board, and received with the customary formalities. They were daily furnished with aids, and advised of the order of exercises. All parts of the post were thrown open to their inspection. Every facility was afforded and every attention was paid to them in the progress of their investigations.

#### EXAMINATIONS.

The candidates for admission to the Academy were first examined. This being a change from the previous practice, the board were invited to witness the ordeal. Proficiency in reading, writing, spelling, grammar, arithmetic, geography, and the history of our country is required to qualify for admission. The result showed that out of ninety examined, ten were rejected for physical disability, and twenty-two for defectiveness of scholarship. (See Appendix, Exhibit No. 1.)

The examination of the first class, consisting of forty-three members, was continued for several successive days, and covered the principal topics of the last academic year. The discussions and answers in military and civil engineering, in military and international law, in mineralogy and geology, in ordnance and gunnery, and in cavalry tactics, fully evinced the attainments of the graduating class in these branches of study.

The second class, numbering sixty members, was examined in philosophy, chemistry, infantry tactics, artillery tactics, and drawing.

The third class, numbering fifty-one members, was examined in mathematics, French, Spanish, and drawing.

The fourth class, numbering fifty-five members, was examined in mathematics and French.

The acquirements of the young gentlemen in each of these classes, in their respective studies, so far as the board had opportunity to judge of them, were generally commendable.

Each cadet is examined upon two topics, one by illustrations upon the blackboard, the other by questions from the professor. In the

case of the three lower classes, the interest is divided between two simultaneous examinations before respective subdivisions of the academic board. This requires either a corresponding division of the Board of Visitors, or an alternation between the two centers of attraction, which is not wholly satisfactory. In the opinion of the board, the examination should be conducted in the presence of the whole military and academic staff and of the assembled spectators. The requisite additional time might well be occupied, in view of the obvious advantage.

#### MILITARY EXERCISES.

The board were fortunate in witnessing the out-door exercises, some one of which was given each day, through a period of weather unusually propitious. These exercises consisted of the battalion, skirmishing, light artillery, siege artillery, sea-coast artillery, pontoon, and squadron drills, together with practical duties in the laboratory, military signaling and telegraphy, and the use of the sword and bayonet. The exercise of the evening, mortar drill and the several exhibitions of pyrotechnics, all of which were quite superior, elicited the warmest commendation.

#### GRADUATION CEREMONIES.

On Monday, June 12, the board attended at the chapel on the interesting occasion when the diplomas were awarded to the graduating class by Major General George G. Meade, in the presence of the President of the United States, of the Board of Visitors, of the military and academic staffs, of the corps of cadets, and a large concourse of spectators. Senator Carpenter, a member of the board, delivered an address, and the imposing ceremony, enlivened by the stirring music of the well-appointed and efficient band of the post, was concluded by the singing of the usual parting hymn and the benediction.

#### RELIGIOUS SERVICES.

During their sojourn at the post, the board attended the public religious services, which are held in the chapel at half past ten o'clock every Sabbath morning, where all the officers and men, unless absent on duty, or attending religious services elsewhere, are required to be present.

The physical infirmities of the chaplain permanently disabling him for duty, his place during the past year has been supplied by such clergymen as could be secured from time to time. These services were conducted by the president of the board on two successive Sabbaths.

A second service is generally held in the afternoon, attendance upon which is entirely voluntary. Other religious meetings are quietly but earnestly maintained among a portion of the cadets themselves. And thus is furnished a gratifying evidence of the respect paid by all to the ordinances, and of the value set by many on the influence of the Christian religion.

#### THE CHAPLAINCY.

In connection with the chapel service, the board urgently recommend that henceforth the office of chaplain be made distinct; that the term of incumbency be limited to four years; and, as far as practicable, that the religious denominations be represented in rotation, in order that the principle so wisely adopted by the founders of the republic, and working so prosperously throughout the country, may be practically recognized at this post—that is to say, no monopoly of political patronage; no ecclesiastical establishment; no union of church and state.

## THE COURSE OF INSTRUCTION.

The board have carefully considered the entire course of studies pursued at the Academy, both as to the methods of instruction, the nature of the branches pursued, and the time respectively given to each.

With regard to the *methods* of teaching in all the departments, they are able to express an almost unqualified approbation. The processes of imparting a knowledge of the subjects under discussion, seem skillfully chosen to reach the highest intelligence and culture, not so much by crowding the mind with the mere material of learning, as by training it to clear and consecutive thinking, or, in other words, teaching the art of study.

But in reference to the subjects pursued and the relative time devoted, the board respectfully suggest that an important change is imperatively demanded. In fact, considering the advanced conditions of science and civilization at the present day, it is, in the opinion of the board, absolutely indispensable to the future greater efficiency of the institution.

The four years of the academic course, as found by universal experience, constitute the maximum of time proper to be spent in the acquisition of a fundamental education, whether in the science of arms or in the liberal professions of civil life. Those studies which are essential to a military training, with those which are more closely akin to them, especially in view of the great expansion and minute accuracy of modern investigation, must of necessity consume the whole period of the academic curriculum. It has consequently been found that a number of most important branches, particularly those of elocution, English literature, belles-lettres, and ethics, have been thrust aside simply for want of time.

Furthermore, in view of the increasing intimacy of our country with Spanish-speaking populations, the board have been impressed with the conviction that the necessity of a knowledge of this language is not sufficiently understood. When it is remembered that the Spanish is spoken by forty-five millions of people, more than half of whom compose nations in our own hemisphere, and are annually coming into closer connection with us; when it is apparent that every year is extending and complicating our commercial and civil relations; when we consider the influence of future diplomatic intercourse, and even the possibility of military operations, we can scarcely overestimate the value of this study to the young men of the Academy. While, therefore, the board would gladly urge attention to other modern languages, as the French and German, so far as may be practicable, they deem it indispensable that the Spanish should be not only retained but even made more prominent.

## PREPARATORY COURSE.

In the judgment of the board, strong reasons exist for the change they would propose. In the first place, candidates should have every possible advantage for admission to the institution; and while the examinations are fairly conducted, the terms are already as low as can well consist with the higher attainments of the subsequent course, and at the same time with the general preparations of young men for such admission. In the second place, it is to be deeply regretted that no provision has yet been made for the proficiency of the cadet in those studies which are now wholly excluded, and without a knowledge of which no man can be said to be thoroughly educated and fitted for the wider and more solemn duties of after-life.



The board, therefore, earnestly recommend that a preparatory course of at least one year should be established, and, in view of the number of annual rejections, that the minimum age of admission to the Academy be fixed at eighteen years; that the method and standard of admission to the preparatory course be the same as it now is for the Academy: that at the end of this course an examination in the studies of the preparatory year be held, and that no person who cannot pass the test of such examination shall be admitted to the Academy, though he may not be required to pursue the prescribed studies with the preparatory class. And in pursuance of this end, the board likewise further recommend that a professorship of ethics and belles-lettres be established, the incumbent to be selected from civil life, and that the entire course of study be adjusted in accordance with the change proposed.

#### THE ACADEMIC BOARD.

The Board of Visitors for 1871, bear witness that in meeting the Superintendent and members of the military and academic staffs, they were brought into contact with gentlemen who are eminent each in his respective department. The only shadow of this reflection is that none, however useful or conspicuous, can avert the approach of inevitable change. A day must come when it is best that men should retire from the station which they have both dignified and adorned. It is the conviction of the board that such period has arrived in the case of the professor of ethics and law, of the professor of engineering, and of the professor of drawing; and that the Government should afford ample provision for that comfort in their retirement, to which they are entitled by so long a life of active and distinguished public service. And the board would further recommend that the professorship of drawing be abolished, and that hereafter this study be included in the department of engineering, and at the same time restricted to mathematical and topographical drawing.

#### THE LIBRARY.

A collection of some 24,000 volumes constitutes the library of the Academy. The room is spacious and finely located for the purpose. The books are in good condition, and, considering the general design as rather for miscellaneous reference than for erudite and scholastic reading, they seem to be well selected, and the utility of the collection might be augmented by such annual increase as a liberal appropriation would afford.

#### THE APPARATUS AND OBSERVATORY.

The board were gratified to find ample provision of philosophical and chemical apparatus, and, at the same time, surprised that no suitable rooms have been provided for practical processes and experiments. On the other hand, while they were constrained to admire the splendid fixtures and mechanism of the observatory, they regret to see in the mounted telescope the inferiority of forty years ago, and they would respectfully suggest whether it is not expedient to supersede an instrument which is not equal to the present requirements, not worthy of the institution to which it belongs, and not creditable to the American people, whose pride it should be to make everything about this national school conform to the most advanced stages of science and discovery.

## INSPECTION OF BUILDINGS.

The board had the opportunity of examining the buildings at the post with their appointments, in every detail of construction, and were gratified to find the principal structures cleanly, in good order, substantial, and convenient for their purposes, so far as their capacity will admit.

The chapel, while formerly answering all the purposes of its erection, has, of late years, become insufficient to accommodate the increasing numbers in attendance, and the board regard it highly important that none should be excluded from want of room.

The hospitals are both in position and furnishing all that can be desired, yet happily they are tenanted by few. For several months past they have sheltered but some half-dozen men, to whose necessities the Government ministers faithful medical attendance.

The board would respectfully urge the erection of suitable buildings for the philosophical and chemical apparatus, for military relics, trophies, models, and other objects of interest, which have already accumulated beyond the limit of proper accommodation.

The workshops stand in the most unattractive part of the locality, where, though convenient of access from the river, which is an important consideration, they are, nevertheless, surrounded by an almost unbroken wildness of nature, heaped with piles of rubbish. These shops are built chiefly of wood. They are much decayed, and altogether too unsubstantial and precarious for the purposes to which they are devoted. It is clearly the conviction of the board that they should be replaced by others more spacious, permanent, and safe.

The works for the manufacture of gas are greatly in need of repair. Twenty thousand dollars once appropriated to this object has, by recent legislation, reverted to the Treasury.

The place for the deposition of the large quantities of coal annually used at the post is wholly unsuited, it being at the foot of a yard-wall, with no other protection or cover, and not only presenting an unsightly appearance, but also being liable to all the loss of such unnecessary exposure.

## STATE OF THE GROUNDS.

With the exception of those portions which form the sites of the workshops, the grounds, including the plain, the encampment, the cemetery, the garden, together with the forts, the walks, the roads, the wharfs, and the water-courses, are in prime condition. The principal thing now required is a system of sewerage and drainage, which has never yet been adequately provided, and which, from the natural conformation of the place and the injury of heavy storms, is very greatly needed. It would prove the only effectual remedy against the large contingent expense for repairs of damage which now annually accrues.

## FISCAL AFFAIRS.

The board have, by their committee, examined the books and accounts of the post, and found an exact and competent system of checks and balances, showing in every minute detail that the fiscal affairs of the institution are conducted with rigid economy and scrupulous honesty. The vouchers and evidences of all moneys received and expended are so exhibited as to afford full satisfaction. Statements of the accounts of all appropriations and expenditures, as furnished the board by the proper accounting officers, are herewith submitted. (See Appendix Exhibits Nos. 2, 3, and 4.)

## POLICE.

The board find the police regulations efficient and admirable, extending as they do to all the duties and responsibilities of military life, and to all parts of the grounds, walks, cemetery, garden, academic buildings, officers' houses, barracks, mess-hall, laundry, riding-hall, stables, and outbuildings. They impose at all times the strictest regimen. To the natural beauty and grandeur of the place are thus added the finishing attractions. The whole aspect and activity of the post, the neatness, order, and punctuality which mark the disposition of every article and the movements of every hour, attest, in the most striking manner, the completeness of a vigilance which stamps its impress on every hand. To this wise forecast, aided by the salubrity of nature and the protecting kindness of Providence, is due the sanitary condition of the post; the general health which prevails throughout the entire academic course.

## ADMINISTRATION.

The Superintendent is charged with the administration of every department of duty and responsibility at the post, but he has generally been well sustained by his subordinates. The board are pleased to note the evidences of a wise and competent supervision of all that concerns the welfare of this community. Having some eight hundred souls directly or remotely connected with his military family, the Superintendent has not only maintained a school for more than eighty children, but he has directed the various labors of the adults in every branch of industry, and caused to be kept an account of every dollar appropriated and expended; a record of every particular of the profit and loss of the institution. To his judgment and diligence very much is due for the charming appearance of the place, and the remarkable order in which everything is conducted. Alike in the greatest and the smallest matters, whether sanitary, economic, or educational, there seems to have been a spirit of fidelity and painstaking which cannot be too highly praised. Nothing appears to have been neglected which the means placed in his hands enabled him to supply.

In view, therefore, of the arduous and complicated labors of his position, the board freely accord their tribute of approbation to an officer who, having for several years sustained the burdens of his administration with so much fidelity and success, is about to be transferred to another post.

## DISCIPLINE.

In regard to the discipline of the corps of cadets, the board have made such investigation and examination as circumstances have allowed, and have sought to compare its present with its former state. And while the board are compelled to express the opinion that the discipline now existing is not as strict as formerly, they feel that it would be unjust to charge upon the officers now in command at the Academy, a result which has been produced by many extraneous causes, and has been the growth of many years.

Twenty-five years ago West Point was substantially separate from the outside world; for several months of the year a mail was not received oftener than once in three or four days. The presence of visitors was almost wholly unknown, and the officers and cadets formed a community by and of themselves. The relations existing between the officers and cadets was like that at present existing between the officers

and soldiers at a military post. Cadets were permitted to visit at the quarters of professors and officers on Saturday afternoons, and at no other time. But so reserved were the manners of officers, even on such occasions, that the privilege, though recognized, was very rarely exercised. There was substantially no social intercourse between the officers and the cadets.

In those days, too, the rigor of discipline put all cadets, the sons of the rich and the sons of the poor, upon a common footing. The regulations not only prohibited any cadet from receiving money from his parents and friends, but no place existed, or was permitted to exist, on the limits, where cadets could expend money. Occasionally a cadet was allowed to purchase what he pleased under the head of "sundries;" not exceeding one dollar in amount, and that only on the order of an officer in charge.

But all this has changed. West Point is now or fast becoming a place of fashionable resort. Hotels have been erected in near proximity to the post, and hundreds of visitors now repair thither where one did in former years. This influx of fashionable life has caused a relaxation of the rules in regard to cadets visiting. The great distance between officers and cadets has been gradually diminished. Cadets of the first class may now visit officers every day in the week, and officers and cadets associate together with a freedom of intercourse not formerly known. Insensibly the standard of discipline has been lowered, until the Academy has less than formerly the character of the Regular Army, and more the features of a militia establishment, where officers and men are separated while on duty, but mingle in social intercourse when the hour of drill or parade has passed.

Although the regulation in regard to cadets receiving money remains unchanged, yet, at present, a new functionary, known as the "cadet confectioner," is allowed to keep open on cadet limits a place of resort which cadets are known to frequent daily to enjoy the table, and where they may treat their fellows without stint or limit. Thus one of the elements of equality which formerly existed among the cadets is destroyed, and the son of a wealthy man may fare sumptuously, while the poor boy must confine himself to such food as the mess-hall affords.

Many other causes might be mentioned as contributing to the present condition of things, and many other illustrations of the change from the custom of former years might be given. But those members of the board who have been appointed by the Vice-President and Speaker of the House of Representatives, and whose duty it is by law specially made to report to Congress upon this subject, will doubtless do so at length, and therefore this board pass the subject without as full a consideration as would otherwise be demanded. But this board, feeling the importance of a high state of discipline to the efficiency of the Academy, to accomplish the purpose for which it is maintained, earnestly recommend a return to the stricter kind of discipline which was administered years ago. An army must be governed by different methods and upon different principles from a civil society, and to an army and to every military establishment discipline is a necessity.

With a view to this end, in the opinion of this board, the superintendent and commandant of cadets should always be officers of high rank, who, by their age and military distinction, can command not only the respect but the implicit obedience of the cadets.

#### RECOMMENDATIONS.

The board are not insensible to the delicacy of making recommenda-

tions which involve considerable drafts upon the Treasury of the country at a time when an enormous debt weighs it down, and the strictest economy should be the public policy. Yet, without doubt, it is the duty of Congress to make liberal provisions for this post, so long as the institution is maintained as the sole national military school. The board of the present year have endeavored to point out the most pressing necessities, and call to them the attention of the Government.

They would respectfully suggest that the amount which last year repaid to the Treasury may be reappropriated, with such other sums as may be necessary to these important objects.

The board would also respectfully suggest that the loss of clothing and other articles of the cadets by the fire which occurred during the last winter, and which some of them can ill afford to bear, should be reimbursed by the generosity of the Government, inasmuch as the evidence in each case is clear and definite, and there are satisfactory vouchers for the full amount of loss sustained by each cadet.

#### CONCLUSION.

It remains only for the Board of Visitors for 1871, in taking leave of the subject of their investigations, to avow the sentiment of heart-felt pride which, upon the whole view of the case, they experience in regard to this great national military school. When we reflect on its historic associations, on the number of its illustrious sons who have gone out to adorn every department of human enterprise, as well as to defend the country in times of peril; when we see the great benefits thus conferred on so many youths of the republic, and the necessity of the continuance of such an institution, not only for maintaining the national defense, but also for upholding the high standard of scientific attainments, there can be no question among the candid and patriotic as to the feasibility and the duty of giving it a prompt and generous support.

It must, indeed, expect to encounter the criticism and opposition of its enemies, and if these be wisely improved, they may be overruled for the still higher good to which it is reaching forward. The board have only to express the hope that the results of the past may be transcended by the achievements of the future, and that the Academy may flourish as one of the strongest and noblest monuments of the nation.

A. G. EDWARDS, *of Missouri.*

J. NEELY JOHNSON, *of Nevada.*

J. J. WOODS, *of Kansas.*

MATT. H. CARPENTER, *of Wisconsin.*

With the exception of the article on discipline.

B. SUNDERLAND, *of Washington, D. C.,*  
*President of the Board.*

WM. MILLER, *of Tuscaloosa, Alabama.*

With the exception of the article on discipline, and also the article on the retirement of professors.

WILLIAM AIKEN, *of South Carolina.*

Hon. WILLIAM W. BELKNAP,  
*United States Secretary of War.*

*Statement showing the number of new cadets who have reported for examination, who have been rejected, and on what account, from 1867 to 1871, inclusive.*

Years.	Number reported for examination.	Number rejected.	Rejected on what account.						
			Literary incompetency.						Physical disability.
			Writing, including orthography.	Reading.	Arithmetic.	Geography.	Grammar.	History.	
1867 .....	74	19	15	2	8	7	8	9	
1868 .....	113	37	12	8	16	15	25	19	
1869 .....	111	30	13	4	9	13	16	13	
1870 .....	144	78	31	16	29	44	56	46	
1871 .....	90	32	6	2	11	12	15	15	
Total .....	532	196	77	32	73	91	120	96	

EDW'D C. BOYNTON,  
Bvt. Major and Adjutant

ADJUTANT'S OFFICE, U. S. MILITARY ACADEMY,  
West Point, N. Y., June 10, 1871.

## REPORT OF THE COMMISSIONER OF BUREAU OF FREEDMEN, REFUGEES, AND ABANDONED LANDS.

WAR DEPARTMENT,  
BUREAU REFUGEES, FREEDMEN, AND ABANDONED LANDS,  
Washington, October 20, 1871.

SIR: I have the honor to submit the following report called for by act of Congress approved March 3, 1865.

The operations of this Bureau during the year have been restricted to the care of the hospital in this District, the collection and payment of bounties and other moneys due colored soldiers, and such supervision of the educational work as could be given, and such aid as could be rendered by counsel alone. The school funds having been all expended or promised previous to July, 1870, no new appropriations have been made, but old accounts and contracts for school buildings have been settled as far as possible.

To the numerous applications for help, I have been obliged to return only words of advice and encouragement. As no material aid could be granted for the support of schools, reports have not been asked from the teachers. I am not able, therefore, to give the statistics of schools, as in former years.

The collection and payment of bounties and other moneys due colored soldiers, sailors, and marines, in accordance with joint resolution of Congress approved March 29, 1867, have been continued, and this important work has employed nearly all the agents and clerks remaining on duty in this Bureau. The same vigilance and patient labor as in former years have been required to separate the true from the false claims, to discover and identify the claimants to whom money is due, and to pro-

fect them from fraud. The following table shows the work done in collecting claims:

Number of claims awaiting settlement at date of last annual report.....	3, 108
Number of claims received since that date.....	1, 012
<b>Total .....</b>	<b>4, 120</b>
Number of claims settled since date of last annual report.....	1, 128
Number of claims awaiting settlement August 31, 1871.....	2, 992
<b>Total .....</b>	<b>4, 120</b>
Total value of certificates received in settlement of claims filed by this Bureau since date of last annual report.....	\$56, 581 79
Number of contested and doubtful claims filed by attorneys and referred to this Bureau for investigation since date of annual report.....	255
Number of discharge certificates (with letters of rejection) received for delivery to claimants in rejected cases, filed by attorneys.....	2, 838

Since the law of March, 1867, went into effect, 10,634 claims have been filed by this Bureau in the several Departments, and of these, 6,236 have been settled without cost to the claimants, excepting the necessary notarial fees. Had these claims been collected through claim-agents or attorneys, the amount of legal fees would have been \$62,360. This sum has been saved to the freedmen, and a much larger sum has been indirectly saved by their protection from fraud.

In addition to this gratuitous work of collecting claims, all certificates and checks issued by the Treasury Department in settlement of the claims of colored soldiers, sailors, or marines, or their heirs, are, in accordance with the law of March, 1867, "made payable to the Commissioner of the Freedmen's Bureau, who shall pay the agent or attorney his legal fees, and pay the balance to the claimant on satisfactory identification."

Each certificate and check when received is carefully compared with the record, and every precaution is taken to avoid mistake in making the payments. The following schedule shows the amount of money and the number of claims paid:

Balance of pay, bounty, and prize-money on hand August 31, 1870, ....	\$1, 027, 694 16
Amount received from August 31, 1870, to August 31, 1871.....	490, 769 13
<b>Total .....</b>	<b>1, 518, 463 29</b>
Amount paid claimants and attorneys during the year .....	734, 432 55
<b>Balance on hand August 31, 1871.....</b>	<b>784, 030 74</b>
Number of Treasury certificates and checks received during the year....	2, 817
Number of claimants paid during the year.....	4, 138
Total amount from the passage of the act March, 1867, to August 31, 1871.....	\$8, 418, 051 16

Complaints are often made of delay in the settlement of bounty claims. In many cases such delay is caused by the failure of attorneys to furnish the necessary evidence to the Treasury Department. And when settlement is made, and the certificate sent to this Bureau, in some cases a considerable delay is unavoidable in the payment.

The small appropriation for this work has rendered it impossible to employ a sufficient number of agents to discover and identify the claimants, now scattered over the whole country, as promptly as could be desired.

In the Washington Hospital and Asylum, under the care of this Bu-

reau, and supported by the Government, the number of patients treated during the year ending June 30, 1870, is shown by the following table:

TREATED.					DIED.					Per cent. of deaths.	REMAINING.				
Men.	Women.	Boys.	Girls.	Total.	Men.	Women.	Boys.	Girls.	Total.		Men.	Women.	Boys.	Girls.	Total.
652	677	141	187	1,657	65	54	8	14	141	.085	140	109	3	2	254

The majority of the patients now in hospital are so helpless from infirmity or extreme old age that they will require to be supported the remainder of their lives. The following statement exhibits fully their physical condition: Blind, 20; blind, deaf and dumb, 5; very old, 64; old and crippled, 55; loss of limbs, 6; paralysis, 15; idiotic and insane, 29; phthisis, 6.

The appropriation for the support of the hospital for the year ending June 30, 1872, contains the following provisions:

"That no part of said appropriation shall be used in the support of, or to pay any of the aforesaid expenses on account of any persons hereafter to be admitted to said hospital and asylum, unless persons removed thither from some other government hospital." In compliance with this law, no new patients have been admitted to be supported out of this appropriation, but arrangements have been made with the territorial government to assume the care and support of such sick and helpless people as may be sent to the hospital by the municipal authorities.

Besides the inmates of the hospital, there are nearly 100 aged people who draw each a ration from the Bureau, and who, though connected with the hospital, have quarters outside of the buildings.

These were nearly all slaves on the Arlington estate, and came here after the discontinuance of the Freedmen's Village Asylum, but there was not room for them in the hospital buildings.

In the Colored Orphan Asylum (also connected with the hospital in all estimates and appropriations) in this District there are 52 boys, 24 girls, 24 old women, and 1 old man: total, 101. These receive medical attendance and rations from the hospital.

From these statements it will appear that there are 420 persons connected with the hospital dependent upon the Government for their support and for medical attendance, and for whom I trust Congress will continue to make suitable provisions.

The number of officers, agents, and clerks now on duty is 54, a reduction of 33 since the date of the last report. Of these 38 are employed in the office in Washington.

In conducting the business of the office the number of letters received during the year is 15,997, and of letters copied and sent 16,442.

The following is an exhibit of the financial operations of the Bureau for the year ending August 31, 1871:

#### APPROPRIATION FUND.

Balance on hand August 31, 1870.....	\$182,561 66
Appropriation deficiency for the year ending June 30, 1871.....	127,000 00
Appropriation bounty for the year ending June 30, 1872.....	87,500 00
Appropriation medical department for the year ending June 30, 1872.....	78,000 00
Total .....	475,061 66



**Expenditures:**

Salaries of agents.....	\$23,846 09
Salaries of clerks.....	21,923 64
Stationery and printing.....	7,126 50
Quarters and fuel.....	9,624 30
Medical department.....	29,979 24
Commissary stores.....	42,456 40
Transportation of officers and agents.....	11,085 51
Superintendent of schools.....	1,100 00
Schools and asylums, construction, rental and repairs.....	112,527 26
Telegraphing and postage.....	674 64
Collection and payment of bounties.....	98,708 72

Total..... 362,263 42

Balance on hand August 31, 1871..... 112,798 24

**REFUGEES AND FREEDMEN'S FUND.**

Balance on hand August 31, 1870.....	\$2,450 79
Received from auction sales of office furniture.....	694 03
Received from subsistence stores refunded by planters.....	1,211 62

Total..... 4,356 50

**Expenditures:**

For schools..... \$4,386 50

**SCHOOL FUND.**

Arising from the sale of so-called confederate property under section 12, public act No. 114, of July 16, 1866:

Balance on hand August 31, 1870.....	\$15,154 17
Amount received during the year.....	5,780 00

Total..... 20,934 17

**Expenditures:**

For salaries of teachers and rent of school-buildings..... \$20,934 17

I herewith forward an estimate for appropriations to defray the expenses of this Bureau for the fiscal year ending June 30, 1873. But I recommend that the appropriations for the hospital and asylum be intrusted to the proper officers of the territorial government of the District of Columbia, and that that government be required to assume the care and support of the hospital on and after July 1, 1872. I also recommend that the payment of bounties and other moneys due colored soldiers, sailors and marines, or their heirs, be transferred to the Pay Department of the Army, under such regulations for the protection of claimants as the Secretary of War may prescribe, on the 1st of July, 1872, and that this Bureau be closed and its records be turned over to such officer as the Secretary of War may designate.

Very respectfully, your obedient servant,

O. O. HOWARD,

*Brigadier General, U. S. A., Commissioner.*

The Honorable SECRETARY OF WAR.

## REPORT OF THE CHIEF OF ENGINEERS.

OFFICE OF THE CHIEF OF ENGINEERS,  
Washington, D. C., October 20, 1871.

SIR: I have the honor to present, for your information, the following report upon the duties of the Engineer Department during the fiscal year ending June 30, 1871:

## OFFICERS OF THE CORPS OF ENGINEERS.

The number of officers in the Corps of Engineers at the end of the fiscal year was 100 on the active list, and six on the retired list. In addition, the corps was aided in the performance of the duties intrusted to it, by a number of civil engineers, geologists, &c.

Since the last report, the corps has lost by death Major Chauncey B. Reese, brevet brigadier general United States Army; First Lieutenant William H. Chase and Brevet Second Lieutenant James B. Mackall, and one captain and two second lieutenants, by resignation; the captain, Brevet Lieutenant Colonel Peter S. Michie, having been appointed professor of natural and experimental philosophy at the Military Academy.

On the 30th of June, 1871, the officers were distributed as follows:

On duty in the office of the Chief of Engineers, including the Chief.	4
On duty with boards of engineers for fortifications.....	6
On duty with battalion of engineers.....	12
On duty, construction of fortifications.....	8
On duty, survey and construction of river and harbor improvements.....	23
On duty, construction of fortifications, and river and harbor improvements.....	21
On duty, survey of northern and northwestern lakes.....	6
On duty, explorations in the field west of Rocky Mountains.....	2
In charge of public buildings, grounds, &c.....	1
On special duty.....	1
Absent sick.....	1
Detached, on duty with generals commanding divisions, departments, &c., Light-House Establishment, Military Academy, &c..	15
Total.....	100

The officers detached were on duty as follows:

Lieutenant Colonel I. C. Woodruff, engineer third and fourth light-house districts.....	1
Major Nathaniel Michler, on staff of major general commanding Military Division of the Pacific.....	1
Major George H. Elliot, engineer secretary to Light-House Board..	1
Captain John W. Barlow, on staff of Lieutenant General, commanding Military Division of the Missouri.....	1
Captain Peter C. Hains, engineer fifth and sixth light-house districts.	1
Captain David P. Heap, on staff of commanding general Department of Dakota.....	1
Captain William A. Jones, on staff of commanding general Department of the Platte.....	1

First Lieutenant Ernest H. Ruffner, on staff of commanding general Department of the Missouri.....	1
Captain Garret J. Lydecker, First Lieutenant James C. Post, First Lieutenant James Mercur, First Lieutenant John C. Mallery, Second Lieutenant Albert H. Payson, Brevet Second Lieutenant Edgar W. Bass, and Brevet Second Lieutenant William L. Marshall, on duty at the Military Academy.....	7
	<hr/> 15 <hr/>

The following principal civil engineers and geologists were employed on the 30th of June: General J. H. Wilson, member of board of engineers upon improvement of the Des Moines and Rock Island rapids, and improvement of the Illinois River; Clarence King, geologist in charge of geological exploration of the fortieth parallel; and Professor Wesley Newcomb, mining engineer Sutro Tunnel Commission.

By legislation contained in section 6 of the act approved March 3, 1869, it is provided that there shall be no new appointments and no promotions in the Corps of Engineers until otherwise directed by law. Under the operations of this law, the strength of the Corps of Engineers has since that date become so much reduced, that the want of officers, for the performance of the varied and extensive duties imposed by law upon the Engineer Department, is becoming a serious embarrassment. It is earnestly recommended that Congress be asked to so modify the provisions of this law as to remove the prohibition of promotions and appointments in the corps.

#### SEA-COAST AND LAKE FRONTIER DEFENSES.

From the experience gained during the recent war in the attack and defense of sea-coast defenses, and from experiments made since the war, at home and abroad, upon materials in use in such defensive works, the conclusions have been arrived at which form the governing principles in determining the nature and extent of the sea-coast works we are now building. These conclusions, and the steps leading to them, have been set forth in my annual reports during the past few years, but the former may be briefly recapitulated as follows:

First. To confine the new constructions to powerful barbette batteries in earth and sand, thoroughly protected by traverses and parados, and to modify existing barbette batteries so as to bring them to the necessary standard of strength and efficiency;

Second. To substitute as far as practicable depressing gun carriages for those that expose the armament and cannoniers above the parapet;

Third. To make liberal use of heavy mortars;

Fourth. To employ torpedoes as accessories in the defense of the channel ways and approaches to the harbors;

Fifth. To use obstructions and floating batteries to retain the enemy before the guns of the littoral batteries; and

Sixth. To use in the batteries the most powerful guns of modern ordnance.

These principles for the construction of our coast defenses have received both executive and legislative approval, and moderate appropriations for constructions in accordance with them have been made by Congress for the defensive works of some of our principal sea ports and centers of commerce. With these appropriations good progress has been made, during the past year, in the modification of existing works

and the commencement of new emplacements for heavy guns and mortars. For the works along the southern seaboard, the season of active operations, since the granting of appropriations for that section, has not yet arrived, but the modifications will be carried out as far as the moderate means available will allow during the coming working season.

Upon other fortifications not included in the above, the work has been confined principally to the protection of the sites, the preservation of those portions of the works in an unfinished condition, and to the modification of platforms for the introduction of heavier armaments.

In the preceding no reference has been made to casemated works, and there is at present no intention on the part of the Engineer Department to recommend either the modification of existing casemates or the construction of new works of this kind. But it is important that some guns at each of our great harbors should be protected by casemate cover of some kind. What that kind should be has not yet been satisfactorily determined. To learn what maritime countries were doing in this particular, and especially the extent to which iron had been introduced into their sea-coast defenses, Colonels Barnard and Wright and Captain Michie were, by your orders, sent abroad last year. The report of this Board of Engineers, now in press, contains the results of their observations and inquiries, so far as the information gained was not of a confidential character. This information will be found valuable in devising structures for the casemate cover of guns at those sites where such cover is essential to the perfection of the system of shore defenses.

Experiments have been made with King's counterpoise carriage, and are still in progress, while several designs of carriages for effecting the same purpose are under examination in the Engineer Department. There seems to be good reason to believe that a serviceable carriage for the purpose needed will soon be obtained, and in anticipation of this event the points at which such carriages should be placed in our projected works have been designated in advance.

Torpedo experiments, of the character mentioned in my report of the past year, have been carried on at Willet's Point, and considerable advance has been made in the investigation of the methods of firing torpedoes and the development of the law governing explosions of various powders under water.

The use of obstructions in the fairways and channels leading to our sea-ports will be indispensable in a conflict with a maritime power of any prominence, but neither these nor torpedoes can be successfully moored or managed without an intimate knowledge of the direction and velocities of the tidal currents peculiar to the localities. These considerations have led, during the past year, to a series of examinations in our principal harbors upon the velocity and direction of the currents, and data has thus been obtained not only useful for defensive purposes but also for commercial purposes in the improvement of the channel ways and harbors.

\* \* \* \* \*

The progress made in each of the several works upon the coast is more particularly set forth in the following pages. The estimates of amounts required for the year have been made upon carefully considered projects, and are for the completion or continuance of the works in accordance with the approved principles already enunciated.

\* \* \* \* \*

#### MAPS OF CAMPAIGNS AND BATTLE-FIELDS.

Maps of the campaigns of the western armies are being prepared by Colonel E. L. Ruger, late of the United States volunteers. The map

showing the second epoch of the Atlanta campaign, embracing the region from Resaca to the Etowah River, is finished; also, that showing the third epoch south of the Etowah and embracing the battle-fields of New Hope, Church, and Dallas.

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## OFFICE OF THE CHIEF OF ENGINEERS.

I beg leave to invite your attention to the serious inconvenience the business of this office suffers from the restricted space available for its use, and of the unsuitableness of the rooms for the preservation of the valuable maps, drawings, and other records which are of necessity placed in them.

In the labors of the office I was assisted on the 30th of June by the following officers in charge of the several divisions:

FIRST AND SECOND DIVISIONS.—*Fortifications, battalion and depots, lands, armaments, personal, &c.*, Major T. L. Casey.

THIRD DIVISION.—*River and harbor improvements, &c.*, Major J. G. Parke.

FOURTH AND FIFTH DIVISIONS.—*Property accounts, estimates, funds, survey of lakes, explorations, maps, instruments, &c.*, Major J. B. Wheeler.

Very respectfully, your obedient servant,

A. A. HUMPHREYS,

*Brig. General, Chief of Engineers, commanding Corps of Engineers.*

Hon. W. W. BELKNAP,

*Secretary of War.*

REPORT  
OF  
THE SECRETARY OF THE NAVY.

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NAVY DEPARTMENT,  
*Washington, November 25, 1871.*

SIR: I respectfully submit the following report of the Navy Department and the naval service for the past year:

The Navy of the United States now consists of 179 ships of all classes and in all conditions. These are calculated to carry, when in commission for service, 1,390 guns, exclusive of howitzers and small caronades.

Since the date of the last report, the news of the loss of the *Saginaw*, on the 29th day of October, 1870, at Ocean Island, in the Pacific, was received at the Department, and in May last the tug *Primrose* was sold at the navy-yard in this city.

Of the 179 ships remaining on the Navy list, 29 are sailing-ships, and the remainder side-wheel steamers, or sailing-vessels with auxiliary screws; 53 of them, armed with 601 guns, are in service, attached to the various fleets and stations as regular cruisers, dispatch-boats, hospital, store, receiving, and practice ships; these, with the tugs and small vessels in use at the various navy-yards and stations, make the force in commission for all the purposes of naval service.

Of the remainder, 6 are nearly ready for sea, and will join the various squadrons as soon as their crews can be enlisted and organized; 52 are monitors, only one of which is now in commission, the balance being laid up at the various stations, but principally at League Island, where, in the fresh water of the Delaware, their iron bottoms deteriorate with far less rapidity than in the salt water of the other stations; 17 are under repair at the various yards; 13 are on the stocks, never having been completed and launched; and the balance of those whose names are on the list are laid up in ordinary.

Of these last a very large proportion, including, as a general proposition, almost all those built of unseasoned white oak, are unfit for use, and cannot be repaired with advantage.

Built with great rapidity, of the only material available during the pressing emergencies of the war, and many of them designed for special purposes, the necessity of which has passed away, the cost of repairing them would be entirely out of proportion to the results to be obtained,

either of service or endurance. Their usefulness has passed or is passing away. They make a part of the necessary expenditure of the great war, and the nation must accept the loss, and from its abundant resources must supply the deficiency which is thus occasioned. Unless something is done in this direction, our cruising navy, now by no means powerful, indeed scarcely respectable for a nation of our rank and responsibilities, will soon almost wholly pass out of existence as an arm of our national power.

It is certainly true, as suggested in your last annual report, that, situated as our country is, "the Navy is our only means of direct protection to our citizens abroad, or for the enforcement of any foreign policy;" and while we may have some reason to hope that in our own generation we may see the beginning of an end of warlike strife among the more enlightened and free of civilized nations, yet we cannot expect that the world will be wholly civilized in our day, or that freedom will come to it without contention. Barbarism will still respect nothing but power, and barbaric civilization repels alike interference, association, and instruction. Even in civilized communities, ambitious, selfish, and turbulent passions still sway the actions of men, and arbitrary power will not yet resign, without a struggle, its hold on the organizations of civilized society.

Not only on the shores and among the islands of our continent, but in every seaport of civilized Europe, in Asia, from the shores of the Bosphorus to the head of navigation on unnamed rivers on the confines of the Chinese Empire, in Japan, in the islands and semi-continents of the East, and among the groups of the Pacific and the Southern Oceans, our citizens claim and need our protection. In every quarter of the known world they are found occupying every field which enterprise dares to invade or energy avails to conquer; and everywhere, outside of our own limits, wherever they enter, they carry with them affirmative, and sometimes aggressive, ideas of freedom and progress, antagonistic alike to the traditions, customs, and habits of the people, and the ideas and practices of the local governments.

Such is the result of our progressive civilization upon the enterprising and affirmative spirit of our people. Its effect is apparent in every land that they penetrate; and we cannot afford, either as a Government or as a people, to neglect wholly our responsibilities as a representative nation, nor our national obligations to our citizens who, wherever they are, claim the countenance of our Government and the protection of its flag.

I feel it my duty again to press these considerations, so often presented already, in the hope that in their own time the representatives of the people will give their attention to the situation, and take efficient measures, at least, to check the decline of our naval power.

The limits and duties assigned to the various cruising stations have not been changed since my last report, and the naval force given to each has not been materially changed. The vessels actually in commission

on some of the stations are less in number than formerly; but this decrease is rather apparent than real, for in almost all there has been an actual increase of the active force. This has been done by putting out of commission the unwieldy iron-clads, which could only lie inactive in harbor or were towed slowly and at great expense from port to port, and substituting for them, as far as the Department has been able, small and active cruisers, by which means we are enabled to occupy continually a larger extent of cruising ground and visit more frequently the ports assigned to each station, and generally to render more effective service in every department of public affairs where the presence and aid of the Navy is necessary, without greater expense of men and money.

The force on the North Atlantic station is still under command of Rear-Admiral S. P. Lee, who held that position at the making of the last report. The force on this station consists of the *Severn*, the *Swatara*, the *Nantasket*, the *Nipsic*, the *Kansas*, the *Pawnee*, the *Terror*, with the *Worcester* and *Canandaigua* just fitted for the station, and the *Shawmut* now on duty there, but ultimately destined for the South Atlantic—in all 10 ships, mounting 70 guns, all active cruisers, except the *Terror*, which is an iron-clad of the Monitor class.

The South Atlantic station remains, as at the date of the last report, under command of Rear-Admiral Lanman, with a fleet consisting of the *Lancaster*, (flag-ship,) the *Ticonderoga*, and the *Wasp*, with the *Wyoming* already fitted for the station—4 ships, mounting 40 guns, besides the *Shawmut*, detained for the present on duty on the North Atlantic station.

The fleet on the Pacific station, still commanded by Rear-Admiral John A. Winslow, consists of the *California*, the *Pensacola*, the *Narragansett*, the *Saranac*, the *Mohican*, the *Resaca*, the *Ossipee*, the *Onward*, and the *St. Mary's*—in all 9 ships, mounting 99 guns, and divided into two squadrons, viz: the North Pacific and the South Pacific, commanded respectively by Commodore Roger N. Stembel and Commodore David McDougal.

The European station is now commanded by Rear-Admiral Charles S. Boggs, who relieved Rear-Admiral Glisson on the 28th day of January last. The ships belonging to this fleet are the *Brooklyn*, the *Plymouth*, the *Guerriere*, the *Wachusett*, the *Shenandoah*, the *Juniata*, and the *Wabash*, with the *Congress* about to sail—in all 8 ships, with 139 guns.

On the Asiatic station, of which Rear-Admiral John Rodgers is still the commandant, we have the *Colorado*, the *Benicia*, the *Alaska*, the *Ashuelot*, the *Monocacy*, the *Idaho*, and the *Palos*, with the *Saco*, now on her way through the Suez Canal, and the *Iroquois*, under orders to join the squadron—in all 9 ships, mounting 97 guns.

Of these ships on the various stations forty have been more or less refitted and repaired at home or abroad since my last report, and four others, all of the smaller class, now at the various navy-yards, will be ready for sea in periods varying from twenty to sixty days.



During the year the Navy has also supplied 16 officers and 220 men for duty in the Coast Survey service; has completed the survey of the Darien and Tehuantepec routes, has made extensive surveys and soundings for telegraph cables, and, under the direction of Congress, fitted out and dispatched three store-ships loaded with provisions, by the charitable people of our country, for the sufferers from the European war, and has, under like direction and under your order, sent out a vessel, completely fitted, equipped, and supplied, to explore the Arctic Ocean "toward the North Pole."

All these are appropriate and valuable duties for the Navy in time of peace, and are proper expenditures of its material and force; and while they add to the information of the world, and contribute to civilization and advancement, they afford to the officers and men employed a proper and practical school of service and instruction.

#### MIDWAY ISLANDS.

In my last annual report it was stated that the work of deepening the harbor of Midway Islands, prosecuted under the authority of an act of Congress approved March 1, 1869, would of necessity cease in October, 1870, on account of the exhaustion of the fund appropriated for the purpose. Accordingly work on the cut was discontinued on the 21st of the month named, and the working party embarked on the *Saginaw* October 28, for San Francisco. The reports of Commodore Sicard, detailing the progress of the work, will be found in the Appendix. This officer estimates that to complete the canal to a width of 175 feet will require about forty-six months' work, at a cost of \$187,000, without counting the cost of removing the débris or "small stuff." Such would, he thinks, cost as much more.

#### WRECK OF THE SAGINAW.

Leaving Midway Island on the 28th of October, Commander Sicard, of the *Saginaw*, determined to run to Ocean Island, a small island lying about one hundred miles to the westward of Midway, to rescue any sailors who might have been wrecked there, and who, being out of the ordinary track of vessels in that part of the Pacific, would have little chance of relief from any other source. This expedition, though in the direct line of his duty as the commander of a naval vessel, was fraught with the usual perils of navigation in unknown and dangerous waters; and about 3 o'clock on the morning of the 29th of October the *Saginaw*, running slowly in the darkness, was wrecked on a reef outlying the island for which she was bound. With great exertion and the exercise of much energy and skill, all on board, including the officers and men of the ship, and the working party from Midway Island, were safely landed, with a small allowance of provisions and materials rescued from the wreck. Cast upon the shores of an uninhabited island,

with scanty means of subsistence, out of the line of travel, and more than one thousand miles from the nearest port of refuge or relief, then it was that the commanding officer of the *Saginaw* illustrated the benefits of the comprehensive education and strict training which he had received at the hands of the Government, and exhibited the high personal qualities which characterize him as an officer. Ably seconded by his subordinate officers of every grade, Commander Sicard took, immediately, every possible means for the health, safety, and final relief of those who were committed to his command. Whatever could be saved from the wreck was at once secured; measures were immediately taken to keep up the health, spirits, and discipline of the men; fresh water was distilled by means of an old boiler; and everything was organized so that there was no waste of either provisions, material, or labor.

The boat fittest for the service was promptly repaired, provisioned, and equipped, as far as might be, for the perilous voyage, and, manned by one officer and four men, all of whom volunteered for the service, was dispatched to Honolulu, the nearest port from which relief could be expected. After her departure work was vigorously pushed on the island; and when finally rescued, the shipwrecked mariners, with well-directed labor, had almost completed, from the material of their old ship, a new schooner, perfectly seaworthy, and sufficient, under favorable circumstances, to carry the whole shipwrecked party to a port of safety. I have thus collated some of the facts of this case to illustrate my high opinion of the energy and ability displayed by Commander Sicard and his comrades on this occasion, and to show how well such conduct repays the favor of the Government.

The little party who volunteered for the voyage in a small boat to Honolulu, to bring relief to their comrades, more than fifteen hundred miles across a winter ocean, consisted of Lieutenant John G. Talbot, executive officer of the *Saginaw*; William Halford, coxswain; Peter Francis, quartermaster, and John Andrews and James Muir, seamen. They left Ocean Island on the 18th of November, and after a voyage of thirty-one days, during which they encountered terrible difficulties and danger, and endured much privation and suffering, they arrived, on the 19th of December, off the Island of Kanai, one of the Hawaiian group. They had previously lost their oars in a storm, and in attempting to land the boat was upset, and Lieutenant Talbot and three of the men, already exhausted by privation and suffering, were drowned in the surf. William Halford alone survived, and reached the shore in safety with the dispatches from Commander Sicard. Mr. Pierce, our minister to the Sandwich Islands, at once chartered a vessel, which, with a Hawaiian steamer proffered by the government, sailed the same day, and relieved the shipwrecked crew of the *Saginaw*. The thanks of the Department are due to Mr. Pierce and to the Hawaiian government for their energy and kindness.

The death of Lieutenant Talbot closed a career of unusual promise, and in it the Navy lost a brilliant and beloved member. A skillful sailor, an accomplished officer, and a Christian gentleman, his self sacrifice has arrested the attention of his comrades, and will remain an example to the service, which in life his virtues adorned, and whose highest qualities were illustrated in the crowning heroism of his death. His comrades of humbler rank will not be forgotten. With him they faced the dangers of the lonely ocean, and offered their lives, with his, to save their shipwrecked messmates; and no one can estimate how much of danger and suffering, perhaps of death, was saved through the courage and endurance of the sole survivor of that gallant boat's crew.

#### TEHUANTEPEC CANAL.

The Department is in receipt of the report and accompanying maps of the Tehuantepec surveying expedition, under the command of Captain R. W. Shufeldt, United States Navy.

This expedition was authorized by act of Congress, and an appropriation made therefor. A small corps of naval officers was detailed for the work, and the steamer *Mayflower* placed at the disposal of Captain Shufeldt. The *Kansas* was ordered to accompany the expedition for the purpose of surveying the river Coatzacoalcas and its bar. The *Cyane* was ordered to assist the expedition in the survey of the harbors and lagoons on the Pacific coast. It was known that surveys had before been made for a railroad, and the feasibility of supplying the summit-level with water reported by Señor Moro, in 1848, and the main object of the present expedition was to determine, ultimately, the question whether a sufficient supply of water for a ship-canal across the isthmus could be obtained. For this purpose a careful and thorough examination was made of the country adjacent to the lowest passes, under the immediate supervision of Civil Engineer E. A. Fuertes. Señor Moro's proposition was first examined into and found to be impracticable. The attention of the party was next turned to the Rio Corte, or Upper Coatzacoalcas, as the only solution of the question of water supply, and it was found practicable, by means of a feeder, to supply upward of 2,000 cubic feet of water per second. For the technical part of the engineering question, Captain Shufeldt refers to the report of the chief engineer of the expedition. This is accompanied by twenty maps and profiles, with many calculations to prove that a ship-canal across the Isthmus of Tehuantepec is not only practicable, but that the obstacles in the way of the canal-route are of the most ordinary nature.

The party was joined, on the 10th of January, by three Mexican commissioners, who worked in perfect accord with our own force.

The season of the year prevented the running of a line to the Atlantic; yet, from the thorough surveys previously made for railway purposes, and the general information gathered on the frequent journeys of the party, it is assumed that the canal can start at the head-waters of ship

navigation of the river Coatzacoalcos and run thence along its right bank and the valley of a tributary to the dividing ridge at Tarifa, descending through the Tarifa Pass, across the plains, to its Pacific terminus. The total length of such a canal will be 172 miles, including river navigation. It will require locks to overcome a height of 732 feet. The Coatzacoalcos River, forming the harbor at the Atlantic side, is well sheltered, and will require dredging at only a few points. The Salina Cruz Harbor, on the Pacific, is exposed to the south winds, and a breakwater is proposed, to convert this roadstead into a safe harbor. No estimates have been made as to the cost of the work, since a minute survey of the whole region would have required larger means and more time than were at the disposal of the officer in charge.

Full and interesting accounts of the geology, natural history, and productions of the country accompany the report.

#### DARIEN CANAL.

The survey of the Isthmus of Darien, under Commander T. O. Selfridge, which had been interrupted by the advent of the rainy season last year, has been successfully conducted in spite of the great obstacles met in making way through a dense and almost impenetrable wilderness.

The Guard and Nipsic were detailed for this service upon the Atlantic coast, and the Resaca upon the Pacific. Commander Selfridge sailed from New York in December last. His attention for the past year has been directed mainly to that portion of the isthmus bordering upon the valley of the Atrato, known properly as the Tuyra and Napipi routes.

The route of the Tuyra and Atrato Rivers had been reported upon most favorably by former explorers, and hopes were entertained that these reports might prove true. Five months were spent in the examination of this route, a line of levels 120 miles long was run from ocean to ocean, and though the divide in one portion was found to be not over 400 feet in height, the very broken nature of the country which was developed seems to render this portion of the isthmus impracticable for this enterprise.

The survey of the Napipi route has been productive of far more favorable results, and has illustrated the possibility of a ship-canal between the two oceans.

The line adopted by Commander Selfridge commences at the mouth of the Atrato, in the Gulf of Darien, ascends that river for 150 miles to the mouth of the Napipi, and thence across, in the valley of the latter, to the Pacific Ocean, at Cupica Bay. The Atrato is navigable the whole of this distance for ships of the largest size, having a width of 1,500 feet and a depth nowhere less than 30 feet. The actual length of the necessary canal is  $31\frac{2}{3}$  miles, the distance from the Atrato River to Cupica Bay, of which 23 miles is a flat plain, with a rise of 90 feet, and no difficulties of construction. The remaining 8 miles present the only

engineering obstacles; here the hills rise to a height of 600 feet and descend almost precipitously to the Pacific.

Commander Selfridge's report will be found in the appendix. His estimates of cost are based upon a canal 120 feet wide and 26 feet deep. It is proposed to lock up to a summit level of 90 feet, at which point the canal is fed by the Napipi River with a volume, at its lowest stage, of over 500,000 cubic feet per hour—a quantity which can be doubled by a feeder 3 miles long. The 8 miles beyond the summit level include a cut averaging 125 feet deep and a tunnel 5 miles long. The successful operations at the Mt. Cenis and Hoosac tunnels, with the modern improvements in drilling machines and explosives, seem to solve successfully the problem of great tunnels, which now cost but little more than open cuts. The total cost of such a work in this country is liberally estimated at \$95,000,000, which, adding twenty-five per cent. for contingencies, makes a total of \$125,000,000. This route presents not only the great advantage of most excellent harbors at each terminus, but its low cost, compared with other lines, its construction in rock, requiring but a small outlay for annual repairs, the proximity of the heaviest portion of the work to the Pacific Ocean, the absence of swamps, and the comparative healthiness of the position, give it a prominence which repays the cost and labor of the expedition.

These surveys, in addition to developing this excellent route, have, in clearing away the doubts and ignorance hanging over the Isthmus of Darien, in the fixing of its geographical positions, and in giving positive knowledge of the interior, its inhabitants, products, rivers, and mountains, added much to the general information of the scientific world.

The whole of the Isthmus of Darien, as embraced in the instructions of the Department, dated January 16, 1870, having been surveyed, Commander Selfridge returned with the expedition to the United States in July last.

It is gratifying to know that, notwithstanding the privations and hardships incident to this service, and the prevailing idea of the unhealthfulness of the climate, no lives have been lost in the prosecution of these surveys. Most of the work has been done by graduates of the Naval Academy, who, readily adapting themselves to the various duties required of them, have given an additional proof of the usefulness of that institution.

#### SUPPLIES FOR FRANCE AND GERMANY.

In pursuance of a resolution of Congress approved February 10, 1871, three naval vessels, the Worcester, the Supply, and the Relief, were detailed for the transportation of supplies furnished by our people for the sufferers of the European war which was then raging. The vessels soon had full cargoes, shipped respectively at Boston, New York, and Philadelphia, and started on their noble mission; each under instruc-

tions to deliver their cargoes at the points designated by the agents of the relief associations of the respective cities. Having successfully fulfilled their instructions, they returned safely to the United States to the ports from which they started.

#### EXPEDITION TOWARD THE NORTH POLE.

By the ninth section of an act approved July 12, 1870, "the President of the United States was authorized to organize and send out one or more expeditions toward the North Pole, and to appoint such person or persons as he may deem most fitted to the command thereof; to detail any officer of the public service to take part in the same, and to use any public vessel that may be suitable for the purpose; the scientific operations of the expedition to be prescribed in accordance with the advice of the National Academy of Sciences."

Mr. Charles F. Hall, a traveler of great experience in that locality, was appointed by your order to command the expedition fitted out under this authority.

The Perriwinkle, now called the *Polaris*, a small steamer of 387 tons, was selected for the service, and thoroughly prepared and strengthened at the Washington navy-yard to encounter the perils of polar navigation. Mr. Hall himself was permitted to suggest and supervise the preparation of the vessel, and to recommend the persons selected to accompany him.

The general instructions given to Mr. Hall by this Department, those for the scientific operations of the expedition, prescribed by the National Academy of Sciences, and the main correspondence and reports connected with the expedition, from its organization to its arrival at Upernavik, are embraced in the Appendix to this report.

The *Polaris* left Washington June 10, arrived at New York the 14th, completed there her crew and outfit, and sailed the 29th. Touching at New London, St. John's, and Holsteinberg, in Greenland, she reached Godhaven on the 4th of August. The United States steamer *Congress*, detailed to convey to Greenland such stores of the expedition as the *Polaris* could not carry, sailed from New York on the 25th of July, and came up with the *Polaris* at Godhaven on the 10th of August.

The Danish authorities at Godhaven extended every facility to the officers of our ships, and contributed by every means in their power to the success of the expedition.

The *Polaris* took her departure from Godhaven August 17, and reached Upernavik the next day, whence her adventurous crew has sailed into the unknown Northern Ocean, full of hope and vigor, and bearing with them the good wishes of the world.

The Congress, having accomplished successfully the duty assigned to her, left Godhaven August 19, and arrived at New York on the 21st of September.

## COREAN EXPEDITION.

Our minister to China having been instructed to arrange and conclude, if possible, a convention with the people who occupy the peninsula of Corea between the Yellow Sea and the Sea of Japan, for the protection of sailors and other strangers shipwrecked on their coast, it became necessary to that end that he should visit the capital of the country, or at least put himself in direct communication with the authorities. With this view, and with the assent of the authorities of China, to which country the government of Corea is tributary, our minister sailed, in May last, from Nagasaki to Boisé anchorage, on the Tale River in Corea, in the Colorado, the flag-ship of Rear Admiral Rodgers, commanding our Asiatic fleet. The admiral was accompanied by the Alaska, the Benicia, the Monocacy, and the Palos. He was ordered thus to transport and convoy the diplomatic representative of our Government, to exhibit, in his behalf, such force as was proper to illustrate his dignity in the eyes of the people, who respect only the exhibition of power, or as might be necessary to insure the safety of the expedition and vindicate, if need be, the honor of the flag. The wisdom and necessity of this policy was shown in the events which followed.

After the arrival of the fleet at the anchorage, and after communication with and visits from the local authorities, and the assurance on our part and understanding on theirs, that the expedition was not only peaceful but friendly in its objects, a surveying party, engaged in the peaceful occupation of making surveys and soundings, in the interest of science and for the safety of commerce, after having been allowed, with the understood consent of the authorities, and without protest or challenge by any one, to pass up the channel to a point past the Corean forts, far separated from and beyond the reach of assistance from the main body of the fleet, was suddenly and treacherously attacked while in the difficult navigation of an unknown passage swept by strong tides and filled with hidden rocks. The surveying boats were obliged to re-pass the forts, under a fierce fire of cannon suddenly opened upon them, and maintained with vindictive spirit and energy. The small vessels which had accompanied the party hurrying into action answered the fire of the forts, and, driving the Coreans from their works, rescued the surveying boats from danger, with only two of our men wounded.

It was determined, by the concurrent judgment of our minister and Admiral Rodgers, that an explanation should be at once demanded, and that ample time should be given the Coreans to understand the situation and make proper reparation.

This was done, and ten days were allowed to pass, during which no movement was made by Admiral Rodgers, nor was any explanation offered by the Coreans. An attack was then planned and carried out upon the forts and citadel from which the outrage had been committed.

A party of sailors and marines were landed, and, after a difficult march over an almost impassable country, the forts were assaulted and captured June 9th and 10th. The officers and men engaged in the attack displayed perseverance, steadiness, and courage highly creditable to the country and the service.

Five forts were captured and destroyed, fifty battle-flags taken, and 481 pieces of artillery fell into our hands. Upward of two hundred and forty Coreans were killed and a few captured.

Our own losses were three killed and ten wounded; among the former was Lieutenant Hugh W. McKee, a gallant and promising young officer, who fell at the head of his men, himself first inside the enemy's citadel.

Finding it impossible to conclude the peaceful treaty, and not authorized to continue hostilities, except to repel and punish attack, the fleet left the anchorage of Boisé on the 3d of July, and arrived at Chefoo on the 5th of the same month. The latest dispatches indicate that though the direct object of the expedition has failed, yet the punishment which was inflicted upon our treacherous assailants, and the gallant conduct of our forces, has not failed to make an impression upon the people of the Chinese coast, and to contribute materially in its effects to the consideration and comfort and perhaps to the safety of our citizens located there.

#### REPORTS OF BUREAUS.

The reports of the several bureaus of the department will be found in the appendix, together with the report of the admiral, presenting in detail many subjects to which I am unable to allude in this report; I commend them to the careful perusal of all interested in the service.

*The Naval Observatory* has well earned its reputation as an admirable institution, and the works of its officers in late years have placed it in the foremost rank at home and abroad. It is ably and economically administered, and I commend it to the favorable consideration of Congress.

*The Hydrographic Office* has, during the past year, made marked progress, and its publications, both in books relating to navigation and charts, reflect great credit on the officer in charge and on those attached to the office. The report of the hydrographer, Captain R. H. Wyman, is embraced in the report of the chief of the Bureau of Navigation. I particularly recommend that some additional appropriation be made for the advancement of this work, so necessary to our naval and commercial marine. While every great maritime nation is yearly prosecuting the survey of unexplored or insufficiently determined avenues to commerce, the United States has remained idle, and, taking advantage of the work of other nations, has by no means returned to them an equivalent. The means should at least be furnished for the prosecution of more gen



sal surveys, particularly in the Pacific Ocean and the waters most traversed by our commercial marine.

The *Marine Corps*, besides discharging well all their ordinary duties on land and at sea, have also been employed during the past year to accompany the various surveying parties on the isthmuses, and have been called upon several times for the protection of the civil officers engaged in the execution of the revenue laws. For their efficiency and services in this behalf they have received the thanks of the Treasury Department.

#### NAVY-YARDS.

I again call attention to the necessity of developing our most important navy-yards.

The commercial nations of Europe, from their enormous arsenals, are able to strike our shores sharply and suddenly.

Our own yards are generally small in area and very deficient in water front: developed on no well-considered plan, they are imperfectly adapted to the changed condition of construction and equipment.

At *Mare Island*, in California, we have ample space, abundant water front, and, happily, all the requirements of a great naval arsenal.

It is unnecessary to dwell upon our great naval interests in the Pacific, or upon the immense importance of improving the invaluable naval site, in the immediate vicinity of our great Pacific City.

At *League Island* we have had the same ample area and water front, and the means of easily converting its back-channel into an admirable wet-basin, like those in Europe, while the excavation thus made will raise the island to a requisite height.

The Department has been able, on the appropriation made last year for this purpose, to contract with responsible parties for the building of a commodious wharf, and for the dredging of a considerable basin in the back-channel, and the filling in to a proper level of about ten acres of the island, or nearly half the area of the present working yard at Philadelphia.

A navy-yard so ample in its proportions, in the midst of our great coal and iron region, easy of access to our own ships, but readily made inaccessible to a hostile fleet; with fresh water for the preservation of the iron vessels so rapidly growing into favor, surrounded by the skilled labor of one of our chief manufacturing centers, will be invaluable to our country. With the resources of Mare Island on the Pacific and League Island on the Atlantic shore, fully developed on a well-considered plan, the country would receive a great accession of strength; and find new bulwarks against foreign aggression,

At *New London*, also, the appropriation of \$10,000, made by Congress, has been found sufficient for the building of a small but convenient dock, and that station is now in use for laying up ships in ordinary, a point convenient to our repairing-yards at New York and Boston.

## IRON-SHIP BUILDING-YARDS.

In March last, I had the honor to make a report to the Senate, in obedience to a resolution of that body, upon the subject of the proposals made to the Department "for establishing iron-ship building-yards and docks to economize expenditure in the Navy, and to aid in restoring commerce."

This subject is much too comprehensive for cursory discussion in this report, but I have already, in my first annual report, spoken of its great importance to every interest of the country, and I hope to be able hereafter to present some system to be matured under the deliberations of Congress.

## NAVAL PENSION FUND.

The pension-roll on the 1st of November, 1871, was as follows:

1,430 invalids, annually receiving .....	\$130, 634
1,703 widows and children, annually receiving .....	260, 644
<hr/>	
3,133 persons, receiving a total of .....	391, 278
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## EXPENSES AND ESTIMATES.

The whole expenditure of the Department and the service since the date of the last report is \$19,265,240 52, including the payment of invalid pensions and adjudicated prize-money, and the appropriations of Congress for the payment of bounties and claims of various kinds to the first of the present month.

The appropriations for the current fiscal year amount in the whole to \$20,964,717 25, and the expenditures from these appropriations are considerably within the proportion applicable to the period which has elapsed since its commencement.

The estimates for the general expenses of the service for the first year ending June 30, 1873, amount to \$19,925,507 02, and are as follows:

Pay of officers and seamen of the Navy.....	\$6, 500, 000
Current repairs of buildings, docks, and incidental expenses in navy-yards, &c.....	1, 046, 000
Pay of civil establishment in navy-yards, hospitals, &c.....	338, 750
Ordnance and Torpedo Corps.....	1, 142, 900
Coal, hemp, and equipments.....	1, 500, 000
Navigation, navigation supplies, &c.....	137, 000
Hydrographic work.....	28, 500
Naval Observatory, Nautical Almanac, &c.....	65, 000
Repairs and preservation of vessels.....	3, 300, 000
Steam machinery, tools, &c.....	1, 650, 000
Provisions .....	1, 587, 000
Repairs of hospitals and laboratories.....	25, 000
Surgeons' necessaries.....	50, 000
Contingent expenses of various departments and Bureaus.....	1, 307, 000

Naval Academy.....	\$193,408 23
Support of Marine Corps .....	1,049,652 70
Deficiencies of Marine Corps.....	3,718 07
	<hr/> 19,925,507 03

and to these is added the sum of \$507,200 for permanent improvements at the several navy-yards and stations.

These estimates, it will be perceived, are in the aggregate more than \$1,200,000 less than the estimates made for the current year, and more than half a million less than the appropriations made by Congress for that period. It must not be forgotten, however, that they are made closely for the mere maintenance of the naval establishment as it is, and that needed improvement demands increase of appropriations.

#### REDUCTION OF THE NAVY.

The subject of the reduction of the personnel of the Navy has been much discussed, and it becomes not only those who are charged with the responsibility of the question, but also all who are interested in its solution, to meet and consider it deliberately and fairly, keeping in view at once the history of the country and of the service, and looking to the honor and welfare of both.

Though it is sometimes alleged, as a matter of complaint, that there are more officers of the Navy, especially of the higher grades, than are required for the service, yet it is a fact that, notwithstanding the promotions so hardly earned by many gallant officers during the late war, notwithstanding the admiration which they conquered and the high consideration which they deserve at the hands of a Government, which owes its preservation as much to them as to any other class of its servants or people, still the whole number of active officers in the higher ranks of the Navy is considerably less now than it was before the war.

As a matter of fact, the whole number of officers of the three highest grades of the Navy, (including lieutenants and those above them,) on the active list in 1859, was 535, while on the 1st of July, 1871, the number of officers on the active list in the eight highest grades (including lieutenants and those above them) was 488, or 47 less than before the war. Notwithstanding this condition, I recognize the desirability of reducing the military establishments of the country, of every kind, to the lowest point consistent with the dignity and safety of the country and its important interests, and with that attitude of good faith and generosity which becomes a great government and a prosperous people toward its faithful and devoted servants. With all these considerations in view, I am of the opinion that there are some grades in our Navy now established by law which may be safely and properly reduced or dispensed with in time of peace.

The grades of Admiral and Vice-Admiral, assimilating to those of General and Lieutenant General in the Army, were properly established as the recognition and reward of brilliant service in the late war.

These conditions have been fully met by the character and service of the very distinguished officers who have filled, and now fill, those grades. But the grades themselves are not required for the ordinary service of our Navy in time of peace, and they would lose their peculiar significance of honor, if continued after the termination of the war beyond the lives of its most conspicuous actors. I therefore suggest that these two grades be allowed to lapse with the lives of those who now hold them.

The grade of commodore, after the lapse of the grades of Admiral and Vice-Admiral, the grade next to the highest of the service, can also, I think, be dispensed with at this time. The number of officers of this grade is fixed by law at 25. As our Navy is now organized, these officers are not absolutely required for any special duty. It is necessary for the efficiency of the service, and for the dignity, influence, and success of our naval representation abroad, that our fleets on foreign stations should be commanded by officers of the rank of rear-admiral at least. This is the lowest grade of officers to whom the fleets of any naval power are committed, and it is with this grade, or with those of higher rank, that our commandants abroad are to come in constant contact, in every country, and before every people of the world, in the discharge of every duty which may devolve on them, relating either to the policy, interest, influence, or honor of our country. Under these circumstances, to commit the command of our fleets to officers of less rank would not only strike at the efficiency and dignity of the service, and often place it and the power it represents, in official consideration abroad, below that of every petty power, from Portugal to Hayti; but would in many parts of the world always postpone and often endanger the interests of our Government and citizens, to a degree out of all proportion to the small additional expense incurred for officers of the grade referred to.

The number of rear-admirals is limited by the general provisions of the law to ten. These are now temporarily increased by two, who are retained on the active list because they have received the express thanks of Congress for distinguished services; with five cruising stations, and a pressing necessity for a sixth, by a division of the Pacific station, this number of rear-admirals is only sufficient to afford commandants and relief for our fleets abroad, and that without taking into consideration any diminution in the number available, by reason of accident or sickness; to reduce this number would be neither statesmanship nor economy.

Our fleets abroad are, however, generally too small in time of peace to be advantageously divided into squadrons. This leaves the grade of commodore, in such times, without appropriate command at sea, and without duties on shore which may not be discharged by officers of other grades. I therefore suggest that no more promotions be made to this grade after a date to be fixed by law, and that, after this grade shall have lapsed by the death, retirement, or promotion of the present

incumbents, promotions be made to the grade of rear-admiral, by selection as vacancies occur, from the list of captains. This plan will in a short time work the abolition of the whole grade of commodores, twenty-five in number, without real injury to the service or to any one connected with it. The grade of commodore will pass away, and though the captains on the active list will not reach and enjoy its honors, those of them who are deserving will reach the grade of rear-admiral at an earlier and more active age, while only those who are not deserving will miss promotion.

I would further suggest, in accordance with the spirit of the recommendation made this year by the Vice-Admiral, as a member of the Board of Visitors to the Naval Academy, that the term of cadetship for midshipmen be increased by law from four years to six, two of which, at least, shall be spent at sea. The reasons for this change I will take occasion to present more at large hereafter. By this means, the number of officers annually entering the naval service will be reduced by one-third. We may add to these reductions by dropping the mates now employed on temporary duty, except those who have peculiar claims by reason of war service or special fitness. When these reductions are consummated, we will, besides reducing by one-third the number of officers annually entering the service, have accomplished, since the 15th of July, 1870, (including the reductions made by the act of that date,) a reduction of near three hundred in the number of line officers now authorized by law, with an annual saving to the public Treasury of near a half million of dollars.

This is, I think, as far as reductions can be carried at this time without injury or danger. In making these suggestions of reduction, I am conscious that I shall not meet the views of those whose interests are directly affected, and possibly I shall not entirely satisfy those who, on imperfect information or immature reflection, may think further reduction proper. To the first of these classes, I would say that I have made the suggestions after much consideration, and in clear view of the interests of the service, as well as of the country. For the information of the latter class, I beg to present again the following explanations, which I have heretofore made in a less formal manner, showing the many important and complicated duties and requirements of the service:

Our naval organizations are small, and in service are largely separated from and independent of each other. Each organization, however small, must be complete in itself for every purpose of service, with its complement of officers, sufficient in number and experience for every kind of duty and responsibility.

More than one half of the officers on the active list are now actually at sea. But they cannot, no officer can or should, remain always at sea. The efficiency of the service and common humanity alike require that they should have regular relief from their distant and dangerous duties. But if this were otherwise, still they must come home in the

ships which carried them out, because the seamen are enlisted for only three years, and must be returned to the United States for discharge, and their officers must come with them.

There are, however, other reasons why all the officers cannot be kept always at sea.

They are needed for shore duty ; duty required by law, duty as essential to the efficiency, good order, and safety of the Navy, as is sea service itself.

Ships are neither built, nor manned, nor armed, nor equipped, nor largely repaired at sea. All the business connected with the building, preserving, and repairing of war vessels, with recruiting and enlisting men, with providing ordnance, means for navigation, equipment, provisions, clothing, medicine, hospitals, &c., &c., must be attended to on land. Hence the necessity of navy-yards, and naval stations, and an adequate number of officers and men to manage, conduct, and protect them.

The education of cadet midshipmen requires its quota of both officers and vessels.

Courts-martial and courts of inquiry, composed of commissioned officers, as required by law, are as indispensable in administering naval law and justice as are civil courts in civil affairs.

Boards of examination and retiring boards are required by law, and boards of survey and inspection are a constant convenience and necessity.

Officers are also constantly required and employed on other important duty not connected with the several squadrons: some in acquiring a knowledge of the signal code ; some, under requirement of law, on the Light-House Board, with the Coast Survey, the Observatory, and Hydrographic Office ; some, in obedience to resolutions of Congress, in making soundings for telegraphic cables ; and some in exploring the routes of the great interoceanic canals.

Officers of competent rank, knowledge, and experience are required for all these duties, alike by the necessities of the service and the provisions of existing laws.

Whether they are engaged in active duty or waiting orders, justice and sound policy concur in requiring, what existing laws also require, that the pay of naval officers shall, to some extent, continue. If this were not common justice, it would be at least common prudence. No maritime and naval power has ever been or ever will be guilty of the folly of turning its naval officers adrift the moment their cruise is ended.

Navy officers fit for important commands require the training and experience of years, and cannot be obtained at a moment's notice, nor be called into existence by proclamation or legislation, even upon the spur of rebellion or invasion. They are only produced by long-continued processes of instruction and development.

False economy may seek to scatter our officers and cripple our service,

leaving our interests unprotected on every sea, but wise and liberal statesmanship will alone avail to protect our commerce, secure our foreign interests, and maintain our national honor.

In conclusion, I must again express my renewed obligations to the chiefs and officers of the several Bureaus, and to the accomplished Chief Clerk of the Department, and his associates, for the constant and effective energy and skill with which I have been assisted in every branch of departmental duty.

GEO. M. ROBESON,  
*Secretary of the Navy.*

The PRESIDENT.

## PAPERS

### ACCOMPANYING

## THE REPORT OF THE SECRETARY OF THE NAVY.

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### MOVEMENTS OF THE FLEETS, ETC.

#### NORTH ATLANTIC FLEET.

*Commanded by Rear-Admiral S. P. Lee.*

The *Severn*, flag-ship, sailed from Hampton Roads December 3, 1870, touched at Bermuda, St. Thomas, San Juan, in Porto Rico, and Samana, and arrived at St. Domingo City January 1, 1871. She proceeded thence to Port au Prince, Port Royal, Kingston, and Havana, and arrived at Key West February 12. In May she visited Nassau, returned *via* Key West, and anchored at Pensacola June 24; leaving Pensacola August 26, she arrived at Hampton Roads September 7, having touched *en route* at Key West. In October she was temporarily detached from the fleet and ordered to New York, where she arrived the 7th of the month, to participate in the reception of the Russian fleet.

The *Congress*, bearing the broad pendant of Commodore Jos. F. Green, who had been since August, 1870, in temporary charge of affairs on the station, was dispatched from Key West, February 10, to the island of San Domingo, in which vicinity she remained until May 17, when she sailed for Boston, arriving there May 29. The south squadron of the fleet, as a separate command, having been discontinued, Commodore Green was detached, and the *Congress* detailed for special service in connection with the polar expedition, and subsequently with the reception squadron at New York.

The *Yantic*, after completing the deep-sea soundings in which she had been engaged, cruised on the San Domingo coast until May 19, at which date she proceeded to Key West. She left the latter port June 5, towing the iron-clad *Manhattan* to Delaware breakwater, entered Norfolk, and was put out of commission August 1.

The *Nantasket* has been stationed on the coast of San Domingo during the year, with the exception of a recent cruise in another quarter. She has repeatedly visited all the ports of San Domingo and Hayti, also St. Thomas and Kingston, and was specially engaged in facilitating the movements and researches of the San Domingo commissioners. In September she sailed from Samana under instructions to communicate with the principal ports of Porto Rico and those on the east end of Cuba, and then return to her station.

The *Swatara* left San Domingo November 14, 1870, visited St. Thomas, St. Pierre, La Guayra, and Puerto Cabello, and returned to San Domingo December 22. Leaving the latter place January 13, she visited Samana, Puerto Plata, Monte Christo, Cape Haytien, St. Nicholas Mole, Guantanamo, St. Iago de Cuba, Manzanillo, Trinidad de Cuba, Cienfuegos, Bahia Honda, Cabañas, Mariel and Havana, and arrived at Key



**West March 17.** She returned to San Domingo in May, and remained on that coast until September, visited Port au Prince in September, and left there the 29th of that month; touched at Cape Haytien; visited the Cuban ports of Nipe, Naranjo, Padre, Nuevitas, Sagua la Grande, Cardenas, Matanzas, and Havana; touched at Key West, and arrived at Hampton Roads November 4.

The *Kansas* reported at Key West April 27, having been engaged in surveying service at Minatitlan with the Tehuantepec expedition. Her crew being much debilitated from malarial diseases, she was ordered north to recruit, towing the *Wyandotte* to the Delaware breakwater, and arriving at Washington June 15, whence she was sent to Portsmouth, New Hampshire, and has been temporarily connected with the special squadron under Vice-Admiral Rowan, at New York. She has been re-assigned to the fleet, and is under orders to relieve the *Shawmut*, and allow the latter to proceed to the coast of Brazil, her original destination.

The *Nipsic* conveyed a part of the Tehuantepec surveying expedition from Washington to Coatzacoalcas, returned to Key West January 16, and proceeded thence to join the Darien surveying expedition. The latter part of May she reported at Key West for duty in the North Atlantic fleet, and in June was dispatched on a cruise to the Mexican ports. She visited Sisal, Campeche, Puerto Real, Tobasco, Vera Cruz, Tampico, and entered Key West, August 2, for repairs. She is under orders for a cruise to communicate with La Guayra, Puerto Cabello, Curaçoa, Santa Marta, Cartagena, Aspinwall, San Jua de Nicaragua, Belize, and Havana, and return to Key West.

The *Shawmut* was commissioned March 16, and employed until June on special service at New York. July 15 she reported at Pensacola for temporary duty in the North Atlantic fleet, and sailed from there August 28 for San Domingo. When relieved by the *Kansas* she is to proceed to Brazil and join the South Atlantic fleet.

The monitors *Dictator* and *Ajax* came north in June, and were put out of commission; the former at New York, June 28, and the latter at League Island, in June.

The *Tuscarora* arrived at Portsmouth, New Hampshire, January 31, and was put out of commission February 10.

The *Pilgrim* came to Philadelphia, and was put out of commission July 29.

The *Pawnee* arrived at Key West January 27, from Norfolk, having been fitted out as a store and hospital ship for the fleet, and is at present at Pensacola.

#### SOUTH ATLANTIC FLEET.

*Commanded by Rear-Admiral Joseph Lanman.*

The *Lancaster*, flag-ship of this fleet, sailed from Montevideo December 5, and arrived at Rio de Janeiro December 25, 1870. She left the latter port January 5, 1871, visited Bahia, St. Catharine's, and Maldonado, and returned to Montevideo February 25. Proceeding on a second cruise, she sailed from Montevideo May 11, arrived at Rio de Janeiro, May 25, remained there until July 7, when she sailed from Bahia, reaching the latter port July 17. She left Bahia August 5, arrived at Rio de Janeiro August 16, from which latter place she sailed the early part of October for Santos, to be gone a few weeks.

The *Portsmouth* arrived at Montevideo November 23, 1870, from a cruise to the northern ports of Brazil, having visited Rio de Janeiro,

Pernambuco, Maceio, and Bahia. In January she proceeded to Buenos Ayres, and returned in February. March 1 she left Montevideo on a second cruise to the northern ports of the station, and again visited Pernambuco, Maceio, Bahia, and Rio de Janeiro, and returned to Montevideo May 24. August 10 she sailed from the latter port, under orders for home, touched at Rio de Janeiro, remaining there from August 25 to September 5, and arrived at New York October 11, bringing home twenty-eight destitute exiles, who had been received on board in Brazil. She was put out of commission November 21.

The Wasp has been employed on the La Plata, Parana, and Paraguay Rivers during the year, making her headquarters at Montevideo or Colonia, according to the requirements of our interests. July 5 she was dispatched from Montevideo to Ascencion, conveying the Hon. John L. Stevens, United States minister to Uruguay, who desired to visit Paraguay. While on this service she touched at the principal places on the Parana and Paraguay Rivers, reaching Ascencion July 24, remaining until July 29, and returning to Montevideo August 5. The reception of the Wasp at the capital of Paraguay was most flattering, and she was visited by the President, members of the cabinet, and other distinguished officials.

The Ticonderoga sailed from Portsmouth June 22, and reported at Rio de Janeiro, for duty in the fleet, August 23. She left Rio September 5 for the La Plata.

#### PACIFIC FLEET.

The Pacific fleet is composed of two squadrons—the north squadron, commanded by Commodore R. N. Stembel; and the south squadron, commanded by Commodore D. McDougal—the whole under the command of Rear-Admiral John A. Winslow.

Rear-Admiral William Rogers Taylor was relieved of the command of the north squadron, February 28, at San Francisco, by Commodore Stembel.

The Saranac sailed from San Francisco, December 3, 1870, for Sitka, Alaska, with the object of expediting and assisting in the departure of the Cyane from that port, to assist in the operations of the party surveying the Isthmus of Tehuantepec. Having completed this duty she sailed from Sitka on the 22d, and arrived at San Francisco January 2, 1871, touching at Esquimaux, Vancouver's Island, on the passage.

The Saranac was again ordered to sea in February, but, being reported out of repair, was ordered to Mare Island navy-yard to refit.

On May 22 she sailed from San Francisco, bearing the flag of Rear-Admiral John A. Winslow, and proceeded on a cruise to the northward. The cruise embraced visits to all the principal ports on the Columbia River, Puget Sound, and the interior waters of Alaska and British Columbia.

There having been reports of threatened disturbances on the part of the Indians, the principal chiefs were called together at Fort Wrangel, Tongas Island, and the Chilkat River, and were warned that any hostility on their part would be visited with severe retribution by the Government of the United States.

Returning to San Francisco, the Saranac met, at Esquimaux, Vancouver's Island, the English flag-ship Zealous, bearing the flag of Rear-Admiral Arthur Farquhar, R. N., who extended civilities of the most amicable nature. On the 17th of August she arrived at San Francisco for stores and supplies; sailed in November for Magdalena Bay.

The Cyane sailed from Sitka, December 22, under orders to co-oper-

ate in the survey of the Isthmus of Tehuantepec. She proceeded to Ventosa Bay, touching at Acapulco; and, having completed the surveying duty ordered, sailed for San Francisco; arrived at San Francisco June 15 and proceeded to the navy-yard, and was put out of commission September 20.

The Nyack sailed from Callao, November 14, 1870, for San Francisco, touching at Honolulu on the passage. She arrived at San Francisco February 24, 1871, and, proceeding to the navy-yard, was put out of commission March 15.

The Saginaw, after completing the duty ordered in connection with Midway Islands, was lost on Ocean Island, on the night of the 29th of October, 1870. Her officers and crew were taken to Honolulu in a Hawaiian government steamer, and from there were sent to San Francisco.

The Jamestown arrived at Callao from Tahiti January 17, and was for some time employed in repairing, having to go on dock. She left Callao in tow of the Ossipee February 23, with orders to co-operate in the survey of the Isthmus of Darien. She arrived at Panama March 16, and her orders having been changed sailed from that port on the 22d for Valparaiso. She arrived at Valparaiso May 19, and sailed on June 3 for Honolulu and San Francisco, with orders to survey and report on certain rocks and shoals in the North Pacific; arrived at Honolulu August 9, and sailed on the 21st for San Francisco, having completed as nearly as possible the duty assigned her; arrived at San Francisco, September 16, and, proceeding to the navy-yard, was put out of commission October 7.

The California sailed from New York, March 13, for San Francisco, to become the flag-ship of the Pacific fleet, and arrived July 30, having touched at Callao, Peru. She proceeded to Mare Island navy-yard to refit after the passage. Orders having been given her to proceed to the Hawaiian Island, thence to Tahiti, Valparaiso, the principal ports along the coast to Panama, and San Francisco.

The Narragansett sailed from New York, March 26, for San Francisco, and having touched at Rio de Janeiro, Valparaiso, and Callao, arrived September 17, and proceeded to the navy-yard to report as one of the Pacific fleet. She has been ordered to the Hawaiian Islands.

The Pensacola was put in commission October 14. Orders have been given her to proceed to Panama.

The Ossipee arrived at Callao from San Francisco February 20, and became the flag-ship of the South squadron. She has been generally in Callao, but has visited Panama, Payta, Guayaquil, and other ports in the northern portion of that squadron.

The Mohican arrived at Callao from Panama November 11, 1870, and became temporary flag-ship of the South squadron; sailed in December for Guayaquil, and returning to Callao received orders to proceed to San Francisco, touching at the principal ports of Central America and Mexico; arrived at San Francisco, having performed this duty, August 2, and proceeded to Mare Island navy-yard for repairs and stores. She left San Francisco October 16 for Panama.

The St. Mary's sailed from San Francisco October 7, 1870, for Honolulu, with orders to cruise among the islands, and proceed to Talcahuano, Chile; arrived at Talcahuano early in March, 1871, and proceeded to Callao, touching at Valparaiso and other ports on the passage; sailed from Callao June 10, with orders to visit the Marquesas, Feejee, Phoenix, Tonga, and Navigator's group of islands, ports of Australia and New Zealand, and return to Talcahuano, Chile. She arrived at the Marquesas June

30; sailed July 8, and reached Papeeti, Tahiti, July 15. At this latter place, as well as the Marquesas, the case of the mutiny on board the American bark *Roman* was brought to the attention of the governor of the islands, with a view to the arrest of the mutineers. The *St. Mary* left Tahiti July 25, in continuation of her cruise, and should arrive on the south coast in February or March, 1872.

The *Resaca* arrived at Valparaiso November 24, from an extended cruise among the islands of the South Pacific, and sailed soon after for Callao to refit. She was detached in January to co-operate in the survey of the Isthmus of Darien, and was stationed at San Miguel Bay.

Having completed this duty, she returned to Panama June 4, and sailed from that port July 16, for Callao, touching at Guayaquil on the passage.

The *Onward* has been stationed permanently at Callao, as store-ship of the south squadron.

Every port of any importance, embraced in the limits of the fleet, has been visited at least once during the year, and in many cases more frequently.

#### EUROPEAN FLEET.

Rear-Admiral Charles S. Boggs relieved Rear-Admiral O. S. Glisson of the command of the European fleet at Villefranche January 28. Rear-Admiral Boggs will soon be succeeded by Rear-Admiral James Alden, who sailed from New York November 17.

A squadron of this fleet in the Mediterranean has been, until September last, under the command of Commodore J. R. M. Mullany, who recently returned in the *Richmond*.

The following is an exhibit of the movements of the several vessels of the fleet:

The *Franklin*, bearing the flag of Rear-Admiral Glisson, sailed from Lisbon November 18, and arrived at Villefranche November 25, 1870, visited Naples, and returned to Villefranche in January. March 17, bearing the flag of Rear-Admiral Boggs, she again left Villefranche, touched at Naples and Spezzia, and returned in April. April 20 she sailed from Villefranche; arrived at Lisbon April 29; left there May 24 for England and the Baltic; reached Gravesend June 5, and Copenhagen June 30. July 9, sailed from the latter port for Christiania; left Christiania July 15, and arrived off Deal, England, July 20; visited Southampton and Ryde, and sailed August 6 for the Mediterranean, touched at Lisbon, and reached Villefranche August 19. From Villefranche she proceeded to Spezzia, arriving there August 24. She remained at Spezzia until September 16, and returned to Villefranche, where Rear-Admiral Boggs, on the 21st September, transferred his flag to the *Plymouth* and ordered the *Richmond* home. She left Villefranche September 23, arrived at Boston October 31, and has gone out of commission.

The *Richmond*, from November, 1870, to February 24, 1871, was stationed at Marseilles, with the exception of short visits to Villefranche and Leghorn. At the date last mentioned she was sent to Barcelona, from which she returned to Villefranche March 13. In April she made a short cruise—visited Naples, Malta, Spezzia, and Palermo, and returned to Villefranche in June. July 29 she proceeded to Tunis; thence to Malta, Messina, and Naples, and back to Villefranche. She left Villefranche August 8; proceeded to Spezzia, and from there to Malaga and Gibraltar, and returned to Spezzia August 30, where she remained until September 14, leaving there on that day for Philadelphia, *via* Gibraltar and Madeira. She arrived at Philadelphia November 1, and went out of commission November 8.

The Brooklyn arrived at Lisbon from the United States November 15, remained there a few days, and went to Cadiz. She returned to Lisbon December 31; continued there under repairs January, February, and March. April 5 she sailed for Tangiers; touched at Gibraltar and Cadiz while absent, and returned to Lisbon May 3. She left the last-named port May 24 for the English coast and a cruise in the Baltic; arrived at the Isle of Wight June 13; sailed June 24, and reached Christiania June 29. She remained at Christiania until July 1; visited Copenhagen, Cronstadt, Stockholm, Carlskrona, and arrived at Plymouth September 6; whence she proceeded to Villefranche, *via* Tangiers, and was made flag-ship September 26.

The Shenandoah, in November, 1870, was sent from Lisbon to Havre, arriving at the latter port November 23. She was stationed there until March 13, when she was relieved by the Juniata, and went over to Southampton. She left Southampton March 23, touched at Lisbon and Gibraltar, and reached Nice June 5. Late in June she was sent to Mersine, in Asia Minor, and returning visited Jaffa, Alexandria, Messina, Naples, and Spezzia; October 31 was at Villefranche.

The Guerriere sailed from New York December 17, reported at Lisbon January 5, left there January 19, and was stationed at Marseilles from February 15 to March 14. She left Villefranche March 21 for an extended cruise in the east, in the course of which she visited Palermo, Valetta, Malta, Beyroot, Tripoli, (Syria,) Cyprus, Rhodes, Port Said, Alexandria, Patmos, Smyrna, Canea in Crete, Piræus, and Naples. On the passage from Naples to Leghorn she struck on Vado Shoals, and sustained such injury as to require her to be docked and repaired at Spezzia. She has been ordered to await her relief, the Congress, at Cadiz, from which port she will return home.

The Plymouth left the English coast in November, 1870, touched at Lisbon and Gibraltar, and arrived at Villefranche December 21. She sailed from Villefranche February 13, for Bordeaux, touched at Gibraltar and Lisbon, and arrived March 15; left Bordeaux March 25, for Havre, put into Brest, where she was detained until May 9, and proceeded thence to the English coast. In May, June, and July she visited in succession, Flushing, Bremerhaven, Hamburg, and Glückstadt, and returned to Downs July 30. August 6 she left the English coast for the Mediterranean, touched at Lisbon, Gibraltar, and Villefranche, and reached Spezzia August 24. She remained at Spezzia until September 16, and then went to Villefranche, where, on the 21st of September, Rear-Admiral Boggs made her his flag-ship; is making a cruise on the coast of Italy, to return to Villefranche about the 10th of December.

The Juniata having been relieved at Havre by the Shenandoah, in November, 1870, proceeded to Lisbon, thence to Cadiz and Villefranche, arriving at the last-named place January 21. During February, March, and April she visited Tunis, Palermo, Naples, Civita Vecchia, and Leghorn, returning to Villefranche in April; from the 7th to the 18th of April was at Marseilles. In May she accompanied the flag-ship to England, visited Plymouth and Gravesend, and arrived at Copenhagen June 30; left Copenhagen July 8; arrived at Christiania the following day; sailed July 15; touched at Ternensen and Antwerp, and arrived at Ryde, Isle of Wight, July 29. August 4 she left Ryde; was at Antwerp from August 7 to September 16, at Cowes September 18 to September 21, and sailed on date last mentioned for Malaga, but, encountering heavy weather, put into Ferrol September 30.

The Saco, on being relieved at Marseilles in December, proceeded to Malaga, where she remained during January and February. She left

Malaga March 3, arrived at Lisbon March 12, and at Bordeaux April 1. From Bordeaux she proceeded, *via* Lisbon, to the coast of Spain, and in May and June was visiting Alicante, Tarragona, Barcelona; also Marseilles and Nice. July 4, she left Leghorn to visit Algiers, Tunis, Malta, Messina, Palermo, Naples, Spezzia, and Genoa, to return at the termination of this cruise to Marseilles. Orders have been sent out for the Saco to join the Asiatic fleet, proceeding to that station by the Suez Canal. She was at Villefranche November 1.

The Wachusett was commissioned at New York June 1, from which port she sailed June 8 for Norfolk; thence, August 2, for the Mediterranean. She arrived at Lisbon August 31, left there September 21 for Tangier, Gibraltar, and Malaga, and reported at Villefranche October 7; was cruising, at last dates, on the coasts of Italy and Sicily.

The Wabash, flag-ship of Rear-Admiral James Alden, was commissioned at Boston October 24, and his flag was hoisted on board November 1. She sailed from Boston, for New York, November 8, arrived at the latter port November 14, and took her final departure therefrom for her station November 17.

#### ASIATIC FLEET.

##### *Rear-Admiral John Rodgers commanding.*

In the fall of 1870, while the flag-ship Colorado was lying at Wusung, below Shanghai, the commander of the fleet visited Peking and had a conference with Minister Low in relation to the proposed expedition to Corea for the purpose of establishing a treaty with that country for the protection of our shipwrecked seamen. He returned November 29, and the flag-ship left Wusung for Japan December 22, where she remained until February 3, having visited Nagasaki and Kobe, and arrived at Hong-Kong February 8. While here the commander-in-chief made a brief visit to Canton in the Palos. March 11 the Colorado sailed from Hong-Kong, touched at Manila and Amoy, and arrived at Wusung April 5. Mr. Low, United States minister to China, was received on board at Wusung for conveyance to Corea; and the Colorado left that port May 8, and arrived at Nagasaki May 12, where the other vessels to compose the Korean expedition, the Alaska, Monocacy, Benicia, and Palos, were assembled. The Colorado, with the other vessels named, sailed from Nagasaki May 16, reached the Korean coast May 19, and Boisee Anchorage May 30. After the engagements of June 1, 10, and 11, as noted elsewhere, the expedition left Boisee Anchorage July 3, and reached Chefoo, China, July 5, on which latter date Mr. Low landed from the Colorado. August 16 the Colorado arrived at Kofu, Japan, eight days from Chefoo, and when last heard from, September 22, was at Yokohama.

The Benicia returned to Japan in November, 1870, from a satisfactory visit to Teng-chau-fu, to which place she had restored the American missionaries who had fled on account of the Tien-tsin massacres. February 20 she was relieved by the Alaska at Yokohama, and proceeded to Hakodadi February 27, returned to Yokohama April 9, and in May joined the Colorado at Nagasaki and participated in the Korean expedition, after which she went to Chefoo, remained there until September, at which time she was under orders to proceed to Shanghai, ascend the Yang-tse as far as Hankow, and visit all intermediate ports.

The Alaska, in October, 1870, proceeded up the Yang-tse-Kiang to Hankow, remained there several days, and, in returning to Wusung,

visited the treaty ports along the river. American interests along the river are, perhaps, greater than elsewhere in China. The authorities were much impressed with the presence of so large a war vessel at Chin-kiang. She remained at Wusung from November 24 to December 23, made a surveying cruise up the Yang-tse, visited Ningpo and Foo-Chow, returned to Shanghai, and then proceeded to Yokohama and relieved the *Benicia* February 20. Sentiments of warm friendship were expressed toward our Government and people by the Chinese at Ningpo and Foo-Chow. In March she conveyed Mr. DeLong, minister to Japan, to Yokoska, to attend the official opening of the public docks, and to Osaka and Kobe in April. She joined the *Colorado* at Nagasaki in May and participated in the Korean expedition, returned to Chefoo, visited Teng-chau-fu in July, and sailed August 8 from Chefoo for Nagasaki.

The *Ashuelot* wintered at Tien-tsin, on the Peiho River, and arrived at Shanghai April 28, where she was put under repairs, (after four years' continuous service,) and expected to be again ready for service about the 1st of September. She is under orders to Foo-Chow.

The *Monocacy*, having undergone extensive repairs at Shanghai, was again ready for service March 23. She was engaged in conducting certain surveys at the mouth of the Yang-tse until April, and then proceeded to Nagasaki, (the rendezvous for the vessels to compose the Korean expedition.) She participated in the expedition, and in September resumed the survey of the Yang-tse.

The *Palos* conveyed the commander-in-chief of the fleet to Canton in March, and was stationed in the vicinity of Hong-Kong during the winter and spring. In April she proceeded to Wusung, touching at Swatow on the way up the coast. She left Wusung May 8, for Nagasaki, in company with the flag-ship, participated in the expedition to Corea, and subsequently visited Shanghai, Chefoo, and New Chwang; expected to remain at the latter port until about 1st of November.

The store-ship *Idaho* has been stationed at Yokohama during the year.

#### MISCELLANEOUS.

The *Tennessee* was commissioned at New York January 5, and fitted up for the purpose of conveying the commissioners appointed to visit San Domingo in accordance with the resolution of Congress approved January 12, 1871. She sailed from New York January 18, and arrived at Samana Bay January 25; visited San Domingo City, Azua Bay, Port au Prince, Kingston, and Key West; landed the commissioners at Charleston March 26, arrived at New York April 1, and was put out of commission April 18.

The Congress, which returned to Boston from the North Atlantic fleet May 29, was detailed to transport stores to Greenland for the expedition to the north pole. She left Boston July 15, arrived at New York July 18, took on board coal and other supplies which the *Polaris* could not carry, and sailed for Greenland July 25. She touched at St. John, Newfoundland, and reached Godhaven August 10; remained there until the *Polaris* had taken her departure; sailed August 19, stopped at St. John, Newfoundland, and Halifax, and arrived at New York September 21. October 7 Vice-Admiral S. C. Rowan, who was appointed to give the Russian squadron a proper reception, hoisted his flag on board of her at New York.

In addition to the Congress, the *Severn*, and *Iroquois*, also the *Kansas* for a time, were placed under the orders of Vice-Admiral Rowan. The *Iroquois* was commissioned at Philadelphia August 23, and, in company

with the *Kansas*, left that port October 4 for New York. The *Severn* was ordered up from Hampton Roads, and reported for temporary duty in this special squadron October 7.

The *Mayflower*, of the Tehuantepec surveying expedition, returned to Washington May 25, and was put out of commission during the summer.

The *Guard*, of the Darien surveying expedition, returned to New York July 24, and went out of commission August 3.

The *Saratoga* and *Constellation* were in commission from May until October as practice-ships for the cadet-midshipmen.

The *Michigan* has been in commission on the lakes.

The *Worcester*, *Relief*, and *Supply*, referred to in the report, were engaged in conveying supplies to the suffering people of France. The former, after discharging her cargo at London, proceeded to Liverpool and there received on board the guns, &c., recovered from the Blakely Manufacturing Company, and brought them to New York. She is still in commission at Boston. The *Supply* was put out of commission July 22, and the *Relief* September 19. The *Supply*, on her return from the special service, touched at Lisbon.

## REPORT OF ADMIRAL D. D. PORTER.

WASHINGTON, *October 2, 1871.*

SIR: I have the honor to lay before you a report of the general condition of the Navy, as far as it has come under my observation, together with such recommendations as seem to me advisable.

At the last session of Congress an act granting to the seamen of the Navy an outfit of clothing such as is allowed the soldiers and marines in our service, passed the Senate, but failed to become a law, never having reached the House of Representatives. It would be well to bring this matter again to the attention of Congress, as an act of justice to our seamen, who, notwithstanding the benefits conferred upon them, look upon this subject of an allowance of clothing as most important.

I regret to state that numerous complaints are made by commanding officers of vessels abroad in relation to the clothing furnished to the seamen, and nearly every board of inspection is compelled to make similar objections.

During the rebellion a large quantity of a very inferior quality of clothing was purchased, and much that was then unexpended has still further deteriorated by time. This clothing should have been sold, as was recommended two years ago, for as long as any of it remains on hand it will be served out, doing great injustice to the seamen, who are charged high prices for that which it would be really no favor to present them free of cost. The letters I have received from commanding officers speak unfavorably of this clothing, and pronounce it far inferior to that of other navies. The dungaree—or blue nankin, as it *should be*—is particularly bad, as appears from specimens sent me by the board of inspection. I will not attempt to fix the blame in these matters, but merely state the facts.

It is somewhat difficult to obtain good seamen in the Navy, and the only sure way to secure so desirable an end is to guarantee those who enter the service good clothing, good food, and kind treatment.

Many complaints are received from commanding officers in regard to the *quality* of seamen who are sent to ships. It is stated that men rated



as "seamen" are, in many cases, only fit to perform the duties of ordinary seamen, and "ordinary seamen" those of landsmen.

There must be defects in the system of enlistment, or officers at rendezvous are not sufficiently particular in rating men. An order on this very subject was issued about eighteen months since, yet commanding officers still complain that the men are inferior to their ratings.

I would recommend that the present system of enlisting men on board receiving-ships be made a subject of inquiry, with a view to remedy any defects that may exist. Certain it is that there are hundreds of men who ship in the Navy for no other purpose than to draw the advance money, after which they desert, and throw themselves into the hands of shipping-masters. The latter, ignored by the naval authorities, secrete the deserters until opportunity occurs to send them to sea in merchant-vessels.

How officers manage to preserve discipline on board their ships with such mixed crews as they find under their command, especially when we consider how much their authority has of late been diminished, it is difficult to tell. It is only by the exercise of great patience and forbearance, joined to extensive experience, in the management of large bodies of men.

In my judgment it would be for the interest of the Government to recognize a certain number of shipping-masters as its agents, and granting them a percentage for the men they bring to the receiving-ships. These shipping-agents should not be allowed to advance money or clothing to the men enlisted.

At present we certainly obtain an inferior class of men, a fact that sometimes becomes very apparent when our ships fall in with foreign vessels of war. As we have in our Navy, comparatively speaking, a small number of men, we ought to secure the best material in the world.

Recommendations have been made, from time to time, by officers of the Navy, and urged by me whenever I have had an opportunity, to organize a good apprentice system for the purpose of enlisting boys, not with the idea that they are all to be made officers, but to introduce into the service good petty-officers and seamen.

All this has been brought to the attention of Congress in your annual report for 1869; but I would urge that the subject be again presented in the form of a requisition for two thousand boys, in addition to the present allowance of seamen. Then, in the course of three years, with the several training-ships that we have on hand, the naval service will have received a new impetus.

All the data for the organization of a good apprentice system have been collected—such a system as will finally introduce into our Navy a class of seamen inferior to none in the world.

At present, I regret to say, our crews are of a cosmopolitan character; and although there are many good men among them, there are a sufficient number of bad to affect the character of the whole, and to cause more trouble than would otherwise exist.

Among the means adopted to promote the health and comfort of our ships' crews was the introduction of the apparatus for distilling fresh water, which was ordered to be supplied to all vessels in the Navy. The apparatus thus introduced was the "Normandy condenser." It gave great satisfaction to both officers and men, and by its use the health of ships' crews was much improved—little or no sickness existing in the East or West Indian fleets. I regret to hear that this valuable apparatus has been dispensed with, and that the Navy has gone back to the

old system, where the crews drink bad-tasting water, a small quantity of which only is produced by the consumption of a large amount of coal. According to the board of inspection, the water produced by this imperfect method of distillation is passed directly into a receiving tank in the hold, with a high temperature, which causes great deterioration in the provisions there stowed. As a sample of the ill effects this change will have on the service, I will merely state that the *Iroquois*, the last vessel inspected, which might naturally be supposed to have all the modern improvements, is supplied with the same very imperfect surface-condenser she had on her last cruise. Every gallon of water condensed on board this ship costs one pound of coal, and about half a ton per day is expended, which would bring the cost of drinking-water for such a vessel on the Pacific coast to \$4,380 per annum, or more than twice the cost of a Normandy condenser.

Whatever arrangements may be made in the Engineer Department to save steam while under way, I do not hesitate to say that it is a great deprivation to the crew of a ship of war to go to sea without the Normandy condenser, or its equivalent; and having considered the various reports of commanding officers, I recommend that one of these condensers be provided every vessel in the Navy.

#### PRESERVATION OF LIFE.

I am satisfied that in both the Navy and mercantile marine the appliances for preserving life at sea are inadequate, but particularly so in the former. We have on shipboard boats enough to carry about one-third the crews of small vessels and one-fourth those of large ones, two or three rafts that will very likely be out of order when wanted, and about a dozen cork-jackets. This is all.

In a seaway boats cannot float encumbered with men, and circumstances may often occur where they cannot even be got into the water, the largest and most important being stowed on the booms, from which it would require at least ten minutes to get them overboard.

It will be remembered how very lately the sloop-of-war *Oneida* went down in smooth water on the coast of Japan; so suddenly, that what few boats were attached to the ship saved only a small portion of her officers and crew, who stood heroically to their posts to the last. Had the *Oneida* been supplied with cork mattresses, which, lashed up in a hammock and thrown overboard, would support two or more men, all her crew might have been saved. An ordinary mattress, tightly lashed in a good hammock, will support a man for an hour until it becomes saturated with water; how much better then would a cork mattress help to save a shipwrecked man?

I would here remark, for the benefit of officers, that no hammock that is not well lashed up should be allowed to go into the netting; for, in case of a sudden alarm of fire, when it may be necessary to leave the ship in a hurry, the hammocks might be the means of saving the lives of every man on board. Cork mattresses would certainly go far toward accomplishing this end, and I recommend that they be introduced into the Navy. They are not a new invention, nor is my proposition an original idea, these mattresses having already been adopted by some foreign navies. In this invention naval officers will see not only a means of saving life in emergency, but also of preserving the health of the ship in warm climates. Cork shavings or sawdust must be cleaner than either common hair, cotton, or moss, and much healthier to sleep on.

I would also recommend that a trial be made of carbolized cotton ticking for bedding, constructed with an arrangement for filling certain por

tions with air. The bedding will be kept drier and will offer, in addition to the cork, another means of preserving life.

Since the introduction of the torpedo as a method of warfare, there cannot be too many means adopted of saving the lives of ships' crews. Men will fight better when they know that means are at hand by which they can hope to save themselves. It is astonishing what risks men will run under such circumstances, and how cautious they become in the presence of danger when no means of escape are apparent.

#### EXERCISES.

The exercises of spars, sails, boats, guns, &c., as directed in General Order No. 128, have been generally well conducted, although there is more difference in the skill displayed by the various vessels than should exist in a Navy with uniform organization. These differences, however, serve to show the zeal with which officers and men are animated. It was to leave nothing optional with any one that the order instituting these exercises was issued. As you are aware, I have on several occasions found it necessary to bring to your notice a want of attention to the order, which has had the desired effect of improving the exercises on board certain vessels.

It is due to those commanding officers who have shown the greatest zeal in bringing the discipline of their crews up to the highest standpoint that they should receive full credit. I, therefore, take this opportunity to mention the several vessels which excel in the prescribed exercises, as near as I can judge from the returns made according to forms furnished each station.

In thoroughness and rapidity the *Colorado*, flag-ship of the Asiatic fleet, stands No. 1. There is no conceivable exercise in yards, sails, or boats that has not been constantly practiced on board this ship, and the time is quite equal to any that has heretofore been made in the Navy. Great zeal seems to animate the officers and crew of the *Colorado*, and she is entitled to be pronounced a thorough ship of war. To the perfection of her drill in artillery and small-arms, and to the example she has set the other vessels of the fleet, may be ascribed the brilliant victory gained by a handful of Americans over a large force of Koreans posted in well-fortified positions, with a terrible loss to the enemy, who, it is asserted, fought with utmost desperation. By those who know nothing about it the Koreans may be considered despicable foes, but the truth is that they are brave and cruel enemies, only to be overcome by well-trained men, led by skillful and fearless officers.

Next in order to the *Colorado* is the *Richmond*. The latter ship is indeed quite up to the former in her time, although not quite so thorough in the kind of exercises. The *Franklin* also maintains the high reputation she has always enjoyed, and the *Portsmouth* is quite equal to the last two mentioned.

I indicate these four ships as the most excellent, although there are several others that are nearly equal to them, and very systematic in their drills.

I am informed that in some cases where ships' crews drill very well there is a little too much noise, a fault that should be corrected.

I dislike to make comparisons that may seem invidious, but I am sure that officers of the Navy know how much interest I take in its discipline and welfare, and how much its good qualities add to the effect produced by our ships on foreigners and our countrymen abroad.

Nothing has done so much in so short a time to promote the discipline and efficiency of the Navy as the drills, and I am quite sure that

during the coming year the returns from the ships will be still more creditable.

I would recommend more sailing in squadrons. Nothing improves a fleet or squadron so much as the ships acting together. It gives a fine opportunity to exercise fleet-sailing in boats, which single vessels cannot do.

I would respectfully suggest that all vessels fitted out hereafter have the following allowance of steam-cutters:

*First rates.*—Two steam-cutters of first class and one of second class.

*Second rates.*—One steam-cutter of first class and one of second class.

*Third rates.*—Two steam-cutters of second class.

*Fourth rates.*—One steam-cutter of second class.

*Fifth rates.*—One steam-cutter of second class.

This will add greatly to the health and efficiency of the ships' crews, and be a great saving of labor.

In concluding this subject I would add that many officers have expressed the opinion that our ships abroad were never in a more efficient condition than at present, as regards discipline, drill, and *morale*.

#### BOARD OF INSPECTION FOR SHIPS FITTING OUT AND RETURNING FROM SEA.

Since the appointment of a board of inspectors, I am happy to say that there has been a great improvement in the fittings of vessels, and any existing defects have generally been remedied before the ships left for their stations, so that they have gone to sea in better condition for immediate service than heretofore. This is a great improvement, and the members of the board have shown much professional zeal in the execution of the duties confided to them.

If commanding officers make any complaints after they get to sea they cannot be considered free from blame themselves, since they have the best opportunity to correct defects before their vessels sail, by bringing them to the attention of the inspecting board.

In this connection I have the honor to inclose you the report of the board in relation to twelve of the iron-clads at Philadelphia. To save them they require to be put in immediate repair. Their side-backing seems, in most instances, to be in good condition, but the deck-beams are much decayed. It is recommended that they be docked, repaired and painted, iron beams substituted for the wooden ones, iron deck-plates laid on the iron beams, and a wooden deck laid over all.

The rotting of the wooden beams is caused by water percolating through the uncalked iron seams. This would not happen with a properly calked wooden deck over all. The machinery of these vessels also requires thorough overhauling and repairing and many parts renewed.

A similar course should be adopted with the iron-clads at other stations, the Dictator, Monadnock, Amphitrite, Mahopac, Miautonomah, Montauk, Roanoke, Wassuc, Piscataqua, and such others as on further inspection may be found worth it. These are our best iron-clads, and if they are allowed to continue much longer without repairs, we shall have none left.

#### STEAM-PROPELLERS.

Permit me to call your attention to a matter that has become of great interest to the commanding officers of fleets and single ships.

As you will remember, General Order No. 131, issued by the Department June 18, 1869, requires all officers to be careful in the expenditure

of coal, and to use their sails on every occasion where great dispatch is unnecessary.

Our steam-vessels, with few exceptions, having hitherto been supplied with merely sufficient sail to enable them to lay to under, were converted into full-rigged ships, and the two-bladed propeller was substituted for that with four blades; the latter having been found, by the experience of officers, unfit for a ship maneuvering under sail, while the two-bladed propeller can be hoisted or placed up and down the stern-post so as to offer but slight resistance.

The four-bladed propeller retards every movement of a ship under sail and renders maneuvering out of the question. By this change in propellers, commanding officers have been enabled to carry out the orders of the Department and effect a great saving in the expenditure of coal, restoring to the service those seamanlike qualities of our crews which seemed almost to have departed from it.

In all the trial trips made in vessels where the propellers were changed, the two-bladed propeller invariably gave a small increase of speed with only the inconvenience of greater vibration, which latter, though desirable to avoid, is hardly to be considered where so many advantages are gained.

According to the best authorities, "the main object of a propeller is to utilize the power in such a manner that the greatest possible speed may be obtained with the least possible power. The position of the propeller should be such as not to interfere with the ordinary working of the vessel, and its effect should be produced without any disagreeable sensation to those on board. This can be done only with a two-bladed propeller, fitted to a properly constructed vessel, in which it is placed sufficiently abaft the stern-post to prevent too much reaction of water against the stern, causing vibration. These matters have been for many years the subject of close inquiry and experiment in the British and French navies, but have never received from us the attention they deserve. We have certainly fallen behind both these nations in the speed of our national vessels, although we have finer lines of model and heavier-built engines.

Referring to the reports from the frigate *California*, I find that she made her run to Valparaiso in eighty-eight days, being only forty-eight hours of all that period under steam. The time when it was necessary to use steam was, I presume, during the passage through the Straits of Magellan. This is one of the best passages on record, and could never have been made with a four-bladed propeller dragging behind the ship, since even if the propeller revolved, it would prevent the vessel working to windward, for no ship will tack under sail with such a dead drag behind her.

It is only within the last two years that we have instituted any fair comparison between the two and four bladed propellers, and we must, therefore, refer to the reports of the very numerous and careful English and French experiments to arrive at just conclusions.

It is to avoid what every officer who commands a fleet or ship knows to be injudicious, viz, the introduction of the four-bladed screw in vessels required to steam only in emergencies, that I devote more space than may seem necessary to the subject of propellers.

A change was lately made in two vessels of the Navy, but was remedied in time to prevent their going to sea with four-bladed propellers.

The *Narragansett* made her run, under sail, to Rio de Janeiro in thirty-nine days, which is a good average for the best sailing-vessels, and our ships sent to the China seas made fine runs out under sail, experiencing no inconvenience from their two-bladed propellers.

There are certain disadvantages inseparable from an increase in the number of blades. The friction of the extra blades in the water absorbs a large amount of the power of the engine, without any increase in the propulsive power.

The assertion that with a number of blades there is less vibration is partly true, but vibration arises principally from the inequality of resistance during the successive positions of the propeller around its center, and its too close proximity to the stern-post; a fault of construction, not of propellers.

A four-bladed propeller has one-third more weight than a propeller with two blades, and makes a ship drop heavily in an uneasy seaway. It is, in fact, a heavy drag on all occasions.

The most reliable information to be obtained on these matters is from the publication of the experiments made by order of the British admiralty, and I select, out of a number, one that will show that the four-bladed propeller has no advantage in speed over that with two blades; a fact that was confirmed by eight trials made with vessels of our own Navy.

*Trial of the Lord Clyde.*

Draught of water forward, 23 feet; aft, 27 feet.

Full boiler-power.	Number of revolutions of the screw per minute.	Speed of the ship in knots per hour.
First run .....	64	13.846
Second run .....	64	12.721
Third run .....	65	14.285
Fourth run .....	65	12.413
Fifth run .....	63	14.694
Sixth run .....	65	12.040
Mean speed of ship in knots per hour .....		13.666
Mean number of revolutions of the screw per minute .....		64.33
Mean total number per hour .....		3,859.98
Mean speed of the ship, with half boiler-power, in knots per hour .....		11.736

*Full boiler-power circles.*

Number of revolutions on entering .....	64
Number of revolutions after entering .....	60

*Half boiler-power circles.*

Number of revolutions on entering .....	50
Number of revolutions after entering .....	47
Diameter of screw-propeller .....	23 feet.
Pitch-set .....	23 ft. 6 in.
Number of blades .....	2

*Trial of the Lord Warden.*

Draught of water forward, 23 feet 7½ inches; aft, 27 feet 8½ inches.

Full boiler power.	Number of revolutions of the screw per minute.	Speed of the ship in knots per hour.
First run .....	63.	13.636
Second run .....	63.8	13.236
Third run .....	63.3	14.068
Fourth run .....	63.5	12.95
Fifth run .....	63.3	13.74
Sixth run .....	63.	13.33

Mean speed of the ship in knots per hour.....	13.492
Mean number of revolutions of the screw per minute.....	63.31
Mean total number per hour.....	3,798.6
Mean speed of the ship with half boiler-power in knots per hour.....	11.777
Mean number of the revolutions of the screw per minute.....	52.52
Diameter of screw-propeller.....	23 feet.
Pitch.....	21 ft. 4½ in.
Blades adjustable.....	22 ft. 6 in. to 27 ft. 6 in.
Number of blades.....	4

Many similar experiments have taken place with other vessels, and the result has been invariably the same.

By a reference to the logs of our naval vessels it will appear that they have, in but very few instances, developed high speed, eight knots being the general average, while only a very few vessels have attained a speed of twelve.

In the French and British navies, on the other hand, fourteen and fifteen knots is almost invariably obtained in iron and wooden vessels built within the past four years.

In the above statement, relative to the low rate of speed of our vessels, I do not include the four ships of the Tennessee class, which developed a very high rate, but these vessels contained so much machinery, carried so little coal and provisions, and afforded so little room for berthing their crews, that they could not be made efficient ships of war without undergoing extensive alterations.

There is no reason why we should not be able to obtain as high speed as the French and English. Our models are good, and our machinery much stronger, and I therefore attribute the slowness of our ships, in a measure, to the defects in their propellers, which, as far as I know, are the exact reverse of the Griffith propeller, the accepted one in England, and the one used in the Lord Clyde and Lord Warden in the trial before alluded to.

Many other forms of screw-propellers have been used, but this one seems to me to have more advantages than any, excepting, perhaps, the Hirsch screw, lately invented, between which and the Griffith screw there appears to be considerable rivalry.

I herewith insert tables of the trial with each of these two screws on board the same vessel, Her Britannic Majesty's ship Active. The result seems to be in favor of the Hirsch screw, inasmuch as it developed, within a fraction, the same speed, (fourteen knots,) with a smaller amount of indicated horse-power. The facts speak for themselves, and without taking up more space with the subject, I beg leave to recommend that the two-bladed Hirsch screw be tried in several vessels of our Navy.

#### *Report of trial of Her Majesty's steam-vessel Active, Portsmouth Yard, March 10, 1870.*

When tried, March 9, 1870; where tried, Stokes' Bay; when last undocked, November 15, 1869; draught of water forward, 16 feet 5 inches; draught of water aft, 21 feet 4½ inches; state of masts and yards, complete; wind, force, 2 to 3, direction, north; state of the sea, smooth; armament, complete; quantity of coal on board, including 53 tons of fuel-coal, 439 tons; description of coal used, Nixon's navigation; maker of engines, H. Tennant & Co.; description of engines, direct acting horizontal; number of cylinders, 2; diameter of cylinders, 88 inches; length of stroke, 3 feet 6 inches; load on safety-valve, 20.791 pounds; pressure of steam in boilers, 26.33 pounds; vacuum in condensers, forward starboard and after or port, 26.33 inches; number of revolutions, highest mean per minute, 77.21, mean per minute, 74.85, mean per mile, 300.66; mean pressure in cylinders, 20.791 pounds; nominal horse-power, 600; indicated horse-power, 4,015.48; speed of vessel, 14.966 knots per hour; propeller, description, Griffith's, pitch varying from 21 feet 10¼ inches to 26 feet 1½ inches; number, 1; number of blades in each, 2; diameter, 19 feet 1½ inches; pitch, 22 feet 10¼ inches; length, (greatest,) 4 feet and ½ inch;

immersion of upper edge, 10 inches; weather barometer, 30.28; time under way, 5 hours 35 minutes; time at full speed, without stopping, 3 hours 30 minutes; condition of distilling apparatus, good; maker and condition of engine-room telegraph, Suffield's, good; engines stopped from time of moving telegraph, 16 seconds; engines, going astern, started astern from time of moving telegraph, 19 seconds; engines, going ahead, started ahead from time of moving telegraph, 15 seconds.

*Report of trial of Her Majesty's steam-vessel Active, Portsmouth Yard, October 27, 1870.*

When tried, October 26, 1870; where tried, Stokes' Bay; when last undocked, October 22, 1870; draught of water, forward, 16 feet 5 inches, aft, 21 feet 5 inches; state of masts and yards, complete, top-gallant mast down; wind, force, 1 to 2 the first two runs, 5 to 6 last runs, direction, W. N. W. to N. W.; state of the sea, smooth; armament, complete; quantity of coal on board, including 50 tons trial-coal, 450 tons; description of coal used, Powell's, Duffryn & Cowpen's, Hawty; makers of engines, H. Tennant & Co.; description of engines, direct action horizontal; number of cylinders, 2; diameter of cylinders, 88 inches; length of stroke, 3 feet 6 inches; load on safety-valve, 30 pounds; pressure of steam in boilers, 30.83 pounds full-power, 28.25 pounds half-power; vacuum in condensers, forward or starboard and after or port, 26 inches full-power, 27 inches half-power; number of revolutions, highest mean per minute, 70.65 full-power, 54.13 half-power; mean per minute, 69.85, full-power, 53.07 half-power; mean per mile, 2.41 full-power, 273.25 half-power; mean pressure in cylinders, 19.420 full-power, 12.272 half-power; nominal horse-power, 600; indicated horse-power, 3,500.14 full-power, 1,602.80 half-power; speed of vessel, 14.877 knots full-power, 11.764 knots half-power; propeller, description, Hirsch's patent; pitch, 22 to 26 feet; number, 1; number of blades in each, 2; diameter, 19 feet 1 inch; pitch, 26 feet; length, (greatest,) 3 feet 11 inches; immersion of upper edge, 10½ inches; weather barometer, 29.608; time under way, 4 hours 40 minutes; time at full speed without stopping, 2 hours 11 minutes; condition of distilling apparatus not tried; maker and condition of engine-room telegraph, Suffield's, good.

There have been so many different propellers presented which have given good speed, that I may, no doubt, find opponents to the views above expressed. The simplest test is to make experiment, and it is very certain that commanding officers in our Navy are not satisfied with the speed attained by their vessels.

This want of speed is a reflection on our mechanical skill, and every officer in command, who alone is responsible for failure, looks forward with the hope that something may be done to develop better results than are at present attained.

It is not to be supposed that intelligent men, who have spent the greater part of their lives on board steamships of war, are incapable of appreciating the defect of which they complain, and are not worth listening to in a matter where they have all the difficulties and responsibilities of the situation to encounter.

I therefore urge that this matter may receive the greatest attention, and that the best talent be employed in remedying the existing defect in the mode of propelling our naval sea-going vessels, providing that the best two-bladed screw-propeller shall be adopted, to enable commanding officers to fulfill the conditions required of them by the regulations relative to economy in the use of coal.

#### TORPEDOES.

I now approach a subject that has, within the past few years, attracted the earnest attention of all maritime nations. Even those with the smallest pretensions to power on the ocean are devoting much time to the investigation of this means of warfare.

Until within a few years past the use of the torpedo has been almost universally deprecated as an uncivilized mode of warfare, but as improved methods of offense and defense are adopted, making naval vessels more and more formidable, the torpedo has at length forced itself into



notice as the only means of repelling war-machines that are impervious to shot and shell.

The torpedo is the most terrible engine of war ever yet invented, and as its power gradually becomes developed it will no doubt in the end prove a good peace-maker, since it is a well-established fact that the more powerful the instruments of war become the less numerous and less destructive to human life are the wars. We should therefore avail ourselves as far as possible of the new weapon, and endeavor to keep ahead of foreign powers in this mode of warfare, if we do not in others.

At its last session Congress authorized the building of two torpedo-boats, a small force even to commence with; for this matter even now can scarcely be considered one of experiment. Certain facts have been established by the best authorities, both at home and abroad, and all that is needed is to collect these facts into such a form as to make them available against our future enemies.

It is not to be supposed that we can protect our thousands of miles of sea-coast, with its innumerable bays and harbors, by building two torpedo-boats. At present our coasts are very accessible to hostile fleets, and the chief of our Army Ordnance Corps even complains of the defenseless condition of the forts that guard our shores. Upon what then but the torpedo have we in future to depend?

In constructing a torpedo-vessel there enter so many elements that the merit of the contrivance does not consist simply in the hull or steam-machinery; for a slow hull, even if imperious to shot, would fall a prey to the weakest kind of steam-vessel, provided the latter had great speed and *proper appliances* for destroying a vessel under way.

A torpedo-vessel must then have great speed and certain powers of resistance in the hull, but should not be encumbered with such a weight of iron as would make her unwieldy.

She should start rapidly, turn, quickly and be able to go astern as fast as ahead. She should bristle all around with torpedoes, which could be run out twenty-five feet, fired, and rapidly reloaded. She should be divided into numerous compartments, to prevent her from sinking if struck by shot or shell, and she should present but a small portion of her hull above the water as a target for the enemy. She should carry in her bow a heavy rifle-gun for offense or defense, in case of accident to her machinery or other emergency. She should be provided with the best arranged towing and self-acting torpedoes, to be used as occasion requires, and her electrical apparatus and the means of working it and the torpedo-machinery should be of the most perfect description.

It will thus appear that in the proper discussion of this subject a versatility of talent is required.

No doubt a naval constructor would do well in his own department, and an engineer might devise an engine that would give a certain speed to the hull, but these are only part of the requirements necessary to constitute a perfect torpedo-vessel—that is, one that can act with certainty of success.

Hereafter torpedo-vessels will be considered as the light dragoons of a fleet, lying ready when the ships are engaged and covered with smoke, to rush in under its cover and deal destruction right and left, or to tow some disabled vessel of the enemy out of action as a prize, or to blow her up if she declines to surrender.

Ramming will no doubt be extensively resorted to, but it will be found, in the first naval fight that takes place, the torpedo will decide the result.

A fleet once brought to battle could no more elude these swift torpedo-

boats than the unwieldy bison the Indian of the plains; but when contending with iron clads, which have a speed of from fourteen to fifteen knots per hour, a slow torpedo-vessel would be simply worse than useless; she would invite failure or defeat. Any vessel of greater speed could blow up the torpedo-boat with a Harvey torpedo, or one on the principle, which on a swift vessel is, I am satisfied, one of the most effective instruments of destruction ever invented. Any ship can carry it, and even merchant steamers could rely upon it as an almost certain means of defense against an enemy's cruisers.

Reflecting men in the Navy are thoroughly alive to the importance of the improvements that have been, from time to time, introduced into naval warfare, and many would be pleased to aid in the development of this new force. But there is a feeling of delicacy which prevents our officers from intruding their inventions or opinions where they are not asked for or encouraged; a feeling that does not seem to prevail among foreign officers, who are generally very prominent in all matters relating to their profession, and are encouraged in the development of the most practical ideas.

The best way to obtain information is to invite it from officers in active service and lately from sea, or who have been employed abroad in collecting information on the subject under discussion.

In other maritime nations matters concerning naval warfare are submitted to a board of experienced officers—men who in time of war would probably have to direct the use of the different kinds of vessels, and whose attention had been carefully given to the changes occurring in the conduct of their profession.

I have had too much experience of the worthlessness of many of the inventions introduced in time of war, which, devised by persons with no practical naval experience, utterly failed when most required, either from defects in their construction, or from the want of practical fighting men, of courage and coolness, trained in the use of the machines.

I would recommend a permanent board, to meet from time to time and make themselves thoroughly acquainted with the subject of torpedoes, and the various means of using them, to be composed as follows: Two experienced line officers on the active list of the Navy; two of the ablest naval constructors; two of the ablest engineers; the officer in charge of the torpedo station; one or more of the best inventors among the master-machinists, or any expert machinist outside the Navy.

It could scarcely be expected that a board could arrive at anything like just conclusions in a week or month, unless their whole time was devoted to the subject; nor should the responsibility be thrown on a constructor or an engineer alone of devising a torpedo-boat which a sea-officer will have to handle under fire.

No one has taken more interest than myself in the various inventions connected with the torpedo. My early attention was directed to the establishment of the torpedo station, which is now producing such good results, and I saw the necessity of providing all our ships with torpedo defenses, such as outriggers from the bows, which, if properly handled in time of action, would give the vessels great advantages. But these were primitive expedients, bearing as little relation to the late inventions as a cross-bow does to a Remington rifle, and it is with a desire that the officers of the Navy may be induced to give their earnest attention to the subject, that I have dwelt more emphatically upon it than might otherwise appear necessary.

I would recommend that, besides several smaller torpedo-boats, built for coast defense, six, of a little more than a thousand tons each, be

constructed of iron for foreign service. These should be able to keep the sea under steam or sail, in all weather, and be provided with comfortable and well-ventilated quarters for officers and men. The number I have stated would be few enough to build. They might be constructed with light draught of water and perfect ventilation, for use in the rivers of China.

It will take at least three years to build these vessels, even if we commence them now. To construct them after a war has broken out would result as it did with some of the vessels built during the latter part of the rebellion; they were never even used, and will probably never be called into service.

#### ASIATIC STATION.

The Asiatics have recently shown an unfriendly disposition toward European nations, and have, in some instances, treated citizens of the latter with cruelty. In China, the most significant fact to show how the tide is setting is the action of Prince Kung, who, from having been the most friendly of the rulers toward Christians, has lately shown signs of hostility.

The Chinese are becoming much more formidable than they were. They have introduced the best heavy ordnance and small-arms into their country, and are constructing gun-boats on the plan of those of European nations. All this makes them feel stronger and more aggressive.

In case the apprehended hostilities against Christians should break out, the United States are illly prepared to offer protection to our citizens.

The late affair with the Koreans shows how well adapted are our officers and men, with the lately improved fire-arms, to cope with these Asiatics.

I doubt if any foreign squadron abroad could land a better drilled and equipped force than ourselves; but the difficulty under which the commander-in-chief on the Asiatic station labors is the want of small vessels carrying heavy 11 inch guns, which are more destructive against mud forts than any other ordnance afloat.

The tug *Palos* has shown herself invaluable; and it would cost little time or expense to send three more of the same kind of vessel to China. We have them nearly ready, and in a month they could proceed fully equipped like the *Palos*.

In addition to the *Hoquois*, now ready to sail, I would recommend that the *Saco*, at present in the Mediterranean, and the *Wyoming*, nearly prepared for sea at Portsmouth, New Hampshire, should proceed to join the Asiatic fleet by way of the Suez Canal. I make these suggestions for the following reasons, which appear to me important: In case of a renewal of hostilities on the part of the Koreans, calling for the interference of United States vessels, it is evident that Rear Admiral Rodgers will labor under great disadvantages with his large ships, which are not well adapted for navigating the narrow and tortuous channels of the Korean coast, which abound with hidden dangers. The tides rise and fall there 30 feet, with a current of eight or nine knots an hour. Hell Gate, near New York, will serve to convey some idea of the places our vessels will be called upon to navigate. Small vessels can enter and return without much danger, where it would be almost certain destruction for large ships to venture.

In regard to the scarcity of light draught vessels of war in Chinese

waters, it is likely that they will be wanted there, before many years, to defend our countrymen, since a crisis is evidently impending in that quarter, in which all European nations will have to unite in self-defense.

Referring to the necessity of small-class vessels in the China waters, the following hydrographic information may be interesting:

*Canton and Whampoa, on Canton River.*—Canton City, thirty-one miles, is only accessible to vessels of 12½ feet draught. A draught of 23 feet can approach within twelve miles; one of 13½ feet within six miles.

To navigate the numerous tributaries into which the junks retire, a draught of not over 5 feet can be used.

These draughts are for *spring tides*, which have a rise of six feet at Canton, current from three to four knots. Whampoa is accessible at spring tides to a vessel drawing 23 feet of water.

The Boca Tigris and Canton Rivers are fortified at numerous points, but the works are of ancient structure.

*The Min River.*—On this river there are two anchorages. Pagoda anchorage can accommodate vessels drawing but 21 feet. This is the anchorage for the fleet of clippers carrying black tea. Nine miles farther is the city of Foo-Chow, accessible in spring tides only, to a vessel drawing 13 feet. At this city, all foreigners, including many Americans, reside, and business is conducted. One mile farther, navigation, except for flat-boats, ceases.

At the bar the rise at times is 18 feet. The current at Foo-Chow is from two to seven knots. The current and sunken rocks are the reason why our flag-ships do not enter the river. From its mouth to the city is thirty-four miles; to Pagoda anchorage twenty-five miles. Near this latter point is a large arsenal.

*The Yung River.*—On this stream is the treaty port of Ning-po, about sixteen miles from its mouth. The river is accessible at spring tides only, for vessels drawing 17 feet. The current is from one to three knots; rise and fall of tide, 9 feet. The stream is fortified at several points.

*The Yang-tse-Kiang River.*—On this river are the treaty ports of Chiu-Kiang, Kin-Kian, and Hankau. The latter place can be reached by a vessel of 17 feet draught at spring tides, and is 600 miles from the mouth of the river. A vessel drawing 12 feet can go several hundred miles farther. A steam line-of-battle ship drawing 24 feet has anchored off Nanking, two hundred miles up the river. Current from three to eight knots.

Woosung River, on which Shanghai is situated, is a branch of the Yang-tse, a short distance from its mouth. Shanghai is fourteen miles up the Woosung, and is accessible, at times only, to vessels of 24 feet draught. Rise and fall of tide at the bar 10 feet, current three knots. Five miles above Shanghai is the largest arsenal and ship-yard in China, but poorly fortified. Vessels drawing 17 feet can reach that point.

*The Pei-ho River.*—On this river, fifty miles from its mouth, is Tze-chu-lin, (a suburb of Tien-tsin.) This narrow and tortuous stream is from 80 to 220 yards in width between Taku Forts and Tien-tsin, and is well fortified at the entrance. Tze-chu-lin can be reached by a vessel drawing 12 feet water at spring tides. Long vessels find trouble in this river on account of its sharp bends. A steam-launch drawing 4 feet can go ninety miles further to Tung-chow, within twelve miles of Peking. Here the stream is but six yards in width. Rise and fall of tide at Tze-chu-lin 4 feet, at the bar 10 feet. Current from three to four knots. A large arsenal is being completed two miles below the city. The fortifications at Tien-tsin are mud walls, but they are strongly garrisoned.

*The Lian-ho River.*—On this stream, thirty miles from its mouth, is the treaty port of Nin-chwang, accessible, at spring tides only, to a vessel drawing 13 feet. The other ports frequented are Swatow and Chee-foo. The former can accommodate a vessel of 15 feet draught at spring tides, the latter one of 24 feet. Chee-foo is a port of great importance, being within a short distance of the Kona and Pei-ho River.

You will see from the above the importance of employing light-draught vessels in the Chinese waters. The result of English and French experience is to build vessels for this service of from 6 to 10 feet draught of water, with double screws. The French have in China four or five of this class of small vessels, the English about fourteen.

Vessels for service in China should each have one or two steam-cutters which would be particularly serviceable in towing scows in case it became necessary to convey troops.

As foreign nations are conforming to these rules in respect to their naval forces in China, it would seem evident that they are equally applicable to our own service.

I beg leave to draw your attention to a subject on which I would recommend an order should be issued by the Department. It is in relation to our vessels in the China seas moving during the hurricane months. Nothing can be gained by cruising at that season, but, on the contrary, a great deal may be lost. The commanding officers of foreign squadrons never move their ships at that season, while, as far as I can learn, our vessels are moving all the time.

I accordingly recommend that during the time of the year when hurricanes prevail the ships lie in port, or at least do not go any great distance, and even then not unless there is every indication of good weather. These hurricanes are the most terrific known in any part of the world.

If, when no concentrated action is required, the commanding officer of the Asiatic fleet, previous to the hurricane season, should distribute his vessels at those points where American interests require the greatest protection, it would save the ships from being racked to pieces in these most inclement seasons. In the absence of such an order, commanding officers might think themselves obliged to keep their ships moving during the hurricane season for fear of censure if they were to be quiet at such time. The order would relieve them from this responsibility, and would insure the safety of our vessels during the most inclement weather that prevails in any part of the world.

#### IRON-CLADS.

By referring to the list of iron-clads of foreign nations and comparing it with that of last year, you will perceive a large increase of that class of vessel. The fleet of Great Britain, in particular, is most formidable. Never in the history of England was she better prepared for war than at the present moment, in ships, material, officers, and men, as I know to be the case from actual inspection of her vessels of war by our most intelligent officers.

The introduction into our Navy of the monitor system was the death-knell of the great wooden fleets of Europe. England in particular suffered by the change; but, nothing dismayed, the board of admiralty went to work and devised plan after plan until the British fleets now boast the finest equipped iron ships in existence, capable of contending with the combined navies of Europe.

To suppose that this board of admiralty, so unjustly criticised, have

not made mistakes, would be out of the question, but their errors are comparatively few, and have, in most instances, been rectified.

A want of stability in the iron-clads was one defect which has been cured by putting more weight in the bottoms of the ships; but in this, as in other subjects at issue, there has been an amount of professional skill brought to bear that has carried the board of admiralty through most triumphantly.

While England is rapidly attaining perfection in her iron-clads, she is also devoting much attention to a very fast class of vessels designed to cruise against an enemy's commerce.

Besides the 100 iron-clads home and reserve vessels on duty, she now has in commission 101 fast screw-frigates, sloops, and gun-boats on the various stations, giving protection to British subjects in all parts of the world.

I do not believe that we should try to compete with Great Britain in the number of our war vessels, but we should at least have a fair proportion of ships compared with the number in our merchant marine.

Now that our men-of-war are being rigged as full sailing ships, I beg leave to call your attention to the unprotected condition of our citizens among the islands in the Pacific, and recommend that at least four of our vessels should visit during the year the groups in that quarter inhabited by people scarcely civilized enough as yet to recognize the rights of foreigners, and to whom guns make a stronger appeal than any reasoning of merchants or missionaries.

The groups that should be particularly visited are the Marquesas Society, Navigator's, Tonga, Feejee, New Caledonia, Solomon's, and New Guinea, south of the equator; and the Caroline, Ladrone, and Marshall's Islands, north of the equator. Some of these islands are becoming stopping-places for steamers. The Feejee Islands are the depot of an American line from San Francisco to Australia, and the natives are engaged in raising a considerable crop of very fine cotton, which is carried in our steamers to Australia on the way out, or to San Francisco on their return.

Most of the voyage of our men-of-war to these islands could be made pretty quickly under sail, by taking advantage of the trade-winds, using their steam only in calms or among the coral reefs. For such cruising our small wooden vessels are well adapted, and iron-clads are not needed, but we feel the want of the latter class of vessels on foreign stations, where our ships encounter the iron-clads of Great Britain, France, Russia, and Prussia; which latter is becoming a very respectable naval power.

I would therefore recommend a small class of iron-plated vessels, each carrying two heavy rifled guns. These, with all the experience before us, we could successfully build. Constructed entirely of iron, these vessels would last many years, and could cruise under sail or steam, as occasion might require. It would take three years to build these vessels, and six of them would be few enough to comply with the immediate wants of the country.

If we should be involved in war, we would be compelled, as I have repeatedly expressed myself, to depend very much upon our wits and crude, improvised means of defense in lieu of that to which the country is entitled.

It is a homely saying that "it is no time to exchange horses when crossing a dangerous stream," and it is too late to commence preparations for war when the enemy is entering our harbors.

When our officers abroad fall in with the lately built foreign ships,

with their improvements in defensive armor and rifled guns, they are satisfied with the hopelessness of any attempt to encounter with ships like ours the triumphs of European naval architecture.

I know it has been customary for many years to cry out against the inadequacy of our Navy for all the purposes for which a navy is intended, but facts speak for themselves. Any one who will carefully examine into the qualities of the class of vessels upon which we have to depend will be satisfied that we want the closest attention, the best professional talent, and the most ample means to place the Navy of forty millions of progressive people on a footing which will enable it to protect their rights at home and abroad.

The condition of our Navy can only be appreciated by a comparison with the navies of other nations, and I do not quote them with any intention to depreciate ourselves.

In one arm of defense, viz, heavy rifled guns, we are singularly deficient, and it is with these that every foreign fighting-ship is armed. Our smooth bores are in many respects behind the age, and only valuable against forts or wooden vessels. As the vessels that carry the 15-inch gun are mostly for home defense, they could not operate against the fleet of an enemy on foreign shores.

We cannot, at present, make rifled guns in this country. No person will take a contract for them unless he is paid for the new machinery he will have to put up, and the only course left us is to purchase abroad what we require until we can get a Government foundry, with machinery capable of supplying all the guns we want.

#### SHIPS AND GUNS AFLOAT.

I wish to call your attention for a moment to the decadence of our Navy, taking into account the number of ships and guns afloat or preparing for sea.

Since the year 1829, when the Navy, during the existence of the Board of Navy Commissioners, may be said to have started into life, the service has but for a short time increased in efficiency.

We have now in commission and fitting out for relief-ships twenty-nine vessels, mounting 389 guns. Many of these are staunch vessels, but six or eight of the number will soon be worn out, being built during the late war of unseasoned white-oak timber.

As far back as 1829 we had in commission twenty-two vessels, mounting 626 guns; in 1843 we had forty-one vessels in commission, mounting 993 guns; in 1852, thirty-seven vessels, with 626 guns; in 1853, forty-six vessels, with 967 guns; in 1854, thirty-six vessels, mounting 634 guns; in 1859, forty-three vessels in commission, mounting 675 guns.

Thus, from 1829 to 1870 we fell off in guns an average of about six per annum, or about 240 guns in all, and have now afloat 609 guns less than we had as far back as 1843.

There does not seem to be any good reason for this decadence of the Navy. Since 1829 the population of the country has increased more than twenty-six millions, and the value of our property has advanced in a corresponding degree; our citizens are engaged in commerce in the most distant countries, and the United States have gained a position among the powers of the earth that they did not hold when our fleets were much superior to what they are at present. These are the facts from which statesmen can judge whether there is any reason why our Navy should carry 609 guns less than in 1843, when our country was so

much inferior in wealth and population to what it is at present, and whether the time has not arrived to remedy the defect.

After the present cruise, the following-named vessels will have to be thrown aside as unfit for active service. They were hurriedly built for a special purpose during the late war, and being constructed of unseasoned white-oak timber, could not be repaired to any advantage. These vessels are the Congress, Nantasket, Quinnebang, Resaca, Swatara, Worcester, Albany, Delaware, Guerrière, and Severn. They are all very useful and economical, and when they are laid up there will be nothing to supply their places.

In two years, then, the Navy will actually be less than at present by ten efficient vessels, carrying 128 guns, and there is not one ship building to supply their places.

There should be a limit to the repairing of live-oak vessels, although we have now some of these in service, in which hardly any of the original timber can be found, it having disappeared under the frequent repairs to which they have been subjected. Some of our live-oak vessels will have to be laid aside in a few years, as it would not be advisable to again rebuild them.

At present we have a sufficient number of large wooden vessels, but for future wants there require to be built for the Navy twelve wooden vessels of not over one thousand tons each, and six or eight of iron. These should be full-rigged ships, with fine sailing-models and good steam-power, the propellers to trice up. The whole should be carefully designed, and the equipments so composed that a part of one vessel would answer for another. This should, indeed, be a rule in all future plans of naval vessels of every class. All of each class should be built, arranged, and equipped exactly alike, for reasons that must be apparent to any one who has given attention to the subject.

Our mercantile marine at present consists of 22,600 rigged vessels, and we may reasonably expect that it will rapidly increase when the interests of commerce are taken in hand by our legislators.

It is wise economy to make the increase of our Navy correspond with that of our commerce, and not be obliged, as in 1861, to resort to the mercantile marine to find vessels to protect our trade and blockade the southern coast.

At present we could not even avail ourselves of such vessels as they offered, since the Government, in 1861, bought up everything that was serviceable, but for which it would have been in a disagreeable predicament. The vessels thus purchased were used up in hard service during the war, and none have been built to supply their places.

No American steamers run on the Atlantic route, one or two only to Brazil, and three or four to China. All of these are unfit for war purposes.

Nearly every nation of consequence is outstripping us in the race for naval supremacy. The Turks are going largely into the building of iron ships of war, torpedo-vessels, &c., and increasing the number of their arsenals and docks.

Prussia, which two years ago was not considered a naval power at all, has commenced the increase of her navy on a grand scale, and is laying out large depots and constructing yards.

Under the stand-still system we must, sooner or later, lose our naval prestige. As far as it goes, our little Navy does its work bravely; but it looks very inefficient compared with the average navies of Europe.

Within the last year I have collected statements of the naval forces of foreign powers. They are interesting, and enable one to see at a



glance how far behindhand we are in much that comprises naval power, at least in material.

As regards the personnel of the Navy, I feel at liberty to assert that no service possesses a more intelligent set of officers than our own.

#### SIGNALS.

Complaints are made by commanding officers that they cannot communicate with American or foreign merchant vessels, owing to a want of proper signals. While almost every foreign vessel and many of our own merchant ships are furnished with the international code, our national vessels have nothing of the kind given them.

Before the recommendation of the Signal Officer of the Navy, "to furnish Rogers's or Marryatt's code to ships of war," is acted upon, I beg leave to suggest the Commercial Code for all Nations, which has been adopted by every government except Spain and the United States.

In the Signal Book America is mentioned as one of the countries which have adopted the international code, since 1869. Officers naturally ask, "Why, then, adopt the obsolete codes of Rogers or Marryatt?"

Should a vessel be passing Tarifa Light, Straits of Gibraltar, Deal, Dover, or any other of the head-lands on the great highways of commerce, possessing signal stations, she might signal with her Rogers or Marryatt code until her bunting blew away without any notice being taken of her, but by using the "universal code" she could have herself reported or be warned of danger. With the last-named code a ship of war could exchange signals with war and merchant vessels of all nations.

In short there are many reasons why our ships of war should be furnished with the international code of signals, on the use of which the safety of a vessel might sometimes depend.

#### PRESERVATION OF TIMBER.

As soon as the board of Navy commissioners were established, they commenced collecting live-oak timber, copper, and iron, which was distributed among the different navy-yards, to be used only in case of emergency, the timber in the mean time becoming so well seasoned as to equal if not surpass the East India teak.

The store of timber collected by the board has enabled us to build ships that have not only lasted many years, but have stood the pulling to pieces necessary to repairs remarkably well.

In 1852 we had on hand 1,610,000 cubic feet of live-oak timber which was expended during the late war and has not been replaced. Congress owes it to the Navy to appropriate the amount necessary to purchase the above quantity of timber, and also ——— pounds of copper and ——— pounds of iron, expended from the reserve.

While on this subject of timber I respectfully recommend that the improved timber-bending machine be introduced into the navy-yards. As we shall mostly build small wooden vessels, this machine will much decrease the expense, by fashioning timbers, knees, &c., which we have difficulty in cutting in their natural state.

#### YOUNG OFFICERS.

In side-wheel steamers the younger officers lose the advantage of exercises and maneuvers with yards and sails. I would therefore recom-

ment that they should only serve one year at a time in vessels of that description.

The officers serving in the Frolic, Ashuelot, and Monocacy class will soon come before a board for examination, and will scarcely have a fair chance with those who have been constantly employed in square-rigged vessels, or be expected to have gained as much practical knowledge of seamanship.

#### NAVY-YARDS.

Since the close of the late rebellion, little or nothing has been done toward restoring the Southern navy-yards to their former condition, and in consequence they are of little practical benefit to the Navy. That at Norfolk occupies the best site we have. It was selected many years ago by practical and far-seeing officers, owing to its inaccessible position to an enemy, and other advantages not possessed by northern yards.

At Norfolk work can be prosecuted every day throughout the year, and vessels are little exposed to bad weather.

There is a great system of inland navigation to which this navy-yard affords protection, and it is contiguous to four of our largest cities. It should therefore be fostered instead of being left in a comparatively helpless condition.

At present the navy-yard being an isolated depot with easy access to the outer roads approaching it, in time of war an enemy might cut it off from its communications. As soon as possible, therefore, it ought to be restored to its former condition, with all its resources and supplies within itself, and be made a first class yard.

A fine opportunity is now presented to improve the Norfolk yard on a new plan, looking to the future wants of the country. Its present limits can easily be extended for a moderate sum. The report of a board appointed to examine this yard in 1869 does full justice to the subject.

What is immediately required are two more docks, larger than the present one, a quay wall of granite, along the water-front, in place of the present wooden one, (the wooden piers lasting but a short time in these waters,) two timber-sheds for the preservation of timber, coal-sheds for the various departments, an iron-plating shop, a smithery for the department of steam-engineering, four ship-houses of corrugated iron, four launching-ways, and quarters for officers, all of which can be built within the present limits of the yard.

Nothing has been done at Helena since the navy-yard again came into our possession. The improvement of this piece of ground ought to be commenced on some well-devised plan, the execution of which will run through several years. This plan should embrace the filling up of marshes to the level of the upland, a quay-wall of granite and an interior wall separating Government from private property, after the purchase of more land on the Helena side; also the construction of building-sheds and parks pertaining to the several departments.

This navy-yard must ultimately become the most important in the United States, as it will not be possible to increase the area of any of the northern yards, while at Norfolk some 300 acres can be obtained at a reasonable cost. This should be purchased before land advances in price, as it is certain to do within a few years.

The recommendations of the naval board in relation to yards and docks, and for the purchase of land, are entitled to the greatest consideration, and no practical man would hesitate to indorse them.

The present commandant at Norfolk, Rear-Admiral Davis, is of opinion that all the water-front on both sides, extending to Gosport Bridge

will be valuable to the Government; also west through North Creek to its head; thence continuing the line over the intervening ground to Back Creek; thence through Back Creek, by the Elizabeth River, to the southern line of the navy-yard.

The water-front at Gosport is deep, and necessary for naval purposes. North and Back Creeks, being so near each other, could be easily connected, and the whole navy-yard be thus converted into an island of 300 acres, an area none too large.

The navy-yard at Pensacola was virtually destroyed during the rebellion, and little has been done to it since beyond cleaning up the debris. It is now again being resorted to by our West India squadron, as it is the only place south of Norfolk where any kind of repairs can be made to a ship.

In case of hostilities our vessels of war in the Gulf of Mexico would have to resort to Pensacola for repairs, although the yard is lamentably destitute of everything in the shape of work-shops or machinery. Five hundred thousand dollars would not be too much to expend at once for repairs of all kinds in this yard, and after that a suitable sum annually to make it serviceable. An iron floating-dock, to suit the basin now existing at Pensacola, should also be constructed.

The dock lately appropriated for by Congress will not suit the purpose. A different kind will be required, and such a one as will be necessary cannot be built and carried around by sea. The iron will have to be taken to Pensacola and the dock constructed on the spot.

The first requisite in a navy-yard is a supply of docks; without them it is almost useless. In this respect we do not follow the good example of foreign nations who, recognizing the necessity of docks, have in their yards seven to our one.

#### RECEIVING-SHIPS.

I directed an examination of the receiving-ships to ascertain if they were in a suitable condition for the reception of recruits, if the men were well cared for, and if proper discipline was maintained on board.

Receiving-ships have heretofore been unpopular with seamen. Good men hesitate to enlist in the Navy if they find they are to be detained in these vessels, which possess few of the requirements of a sailor's home, and have, indeed, some very objectionable features. In the first place, there is almost a total absence of that routine which belongs to a man-of-war. Men stay on board sometimes for months, sometimes only a few days, and are always in a state of uncertainty, not knowing from day to day when they may expect to be sent away.

Most of the receiving-ships are very old vessels, not in good repair, and for many reasons unfit for the service in which they are used, as the regulations require that the men shall be drilled aloft and at the guns. The decks of the vessels are not in condition for such a service, and the rigging is so old that it would be unsafe to send the men aloft in any numbers.

The officers keep the receiving-ships as clean and comfortable as circumstances will admit, but to enable them to carry out the requisitions the vessels should be kept in proper repair.

I would suggest that the ship-of-the line now used as a receiving-ship at Norfolk be placed in perfect sea-going condition, and receive on board the recruits from Boston, New York, and Portsmouth, New Hampshire, to prepare them for their duties before they go on a regular cruise. This vessel can cruise from port to port, picking up a good many seamen on the way, and do more for the morale of the recruits

than can probably be effected on board an ordinary receiving-ship stationed permanently at either of our sea-ports, where the men are exposed to temptations of every kind, and take the first favorable opportunity to desert. If this plan is not pursued, the receiving-ships should, at least, be thoroughly overhauled and repaired, and the time of the recruits occupied in preparing them for their duties. I append reports of board of inspection, to which I invite your particular attention.

#### MEDICAL REORGANIZATION.

I attach to this report a private letter from Medical Director Ninian Pinkney, which will explain itself better than anything I can say on the subject. I am sure that every naval officer would, from personal motives, be glad to see such an institution as that recommended by Dr. Pinkney established, besides the desire of witnessing the advancement of the medical corps in the practical part of their profession. I am sure this letter will greatly interest you, and will enable you to form correct opinions in relation to a matter that is essential to the improvement of the organization of our Navy.

#### EXPENDITURE OF COAL.

The vessels of the Navy are using entirely too much coal, and the General Order No. 131 is not carried out in the spirit intended. The unnecessary expenditure of fuel costs considerably, in more than one respect. It causes the wearing out of boilers and machinery, and inflicts serious injury on the discipline of the service, preventing officers and men from becoming expert in matters of seamanship.

I would recommend that the annexed form of return be sent quarterly to the Secretary of the Navy by the commanding officer of every steam-vessel in commission, and that only good reasons be accepted for not carrying out General Order No. 131 to the letter.

In some navies the cost of an unnecessary outlay of coal is charged against the pay of the commanding officer of the vessel. I do not recommend such a course toward our officers, who, I am sure, can be controlled by milder measures, but I mention this merely to show the importance attached by other naval powers to the needless expenditure of coal, which, if persisted in, would finally eat out the vitals of any navy.

#### PROPOSED SYSTEM OF TESTS FOR IRON.

In connection with the construction of the torpedo vessels lately appropriated for by Congress, and of the future iron vessels to be built in the Navy, I beg leave to recommend a system of tests of plate and bar iron, round and square.

As we have never yet built any vessels of this kind, it will be very necessary to have such tests in order to secure the best and lightest iron. I therefore recommend the following tests to be adopted in all our navy-yards. They are taken from the best authorities, and can be relied on to secure the best materials to the Government.

*Iron for plating, keelsons, stringers, &c.*—To insure the proper quality of iron for these purposes, it must be tested both hot and cold.

*Hot test.*—There will be made from a piece of the iron of the proper size, cut or drilled but not punched, from a plate taken at hazard from each delivery of fifty plates, a spherical bowl or *calotte*, with a flat rim in the original plane of the plate. The chord of this calotte, measured

inside, must be equal to thirty times the thickness of the plate, and the ring, measuring inside, must be equal to ten times the same thickness. The flat circular edge will have for its width seven times the thickness of the plate, and be worked into the spherical part with a round having for radius the thickness of the plate, this round to be measured on the inside of the angle. This bowl, worked with all the necessary care, should show no crack, tear, or blister.

*Cold test.*—This test has for its object to determine the strength of the plates, and their capacity for extension as well in the direction of rolling as perpendicular to it.

The mean result of the strength and elongation obtained in both directions will be established from at least five trials of each.

In the direction which gives the greatest strength or lengthwise, the breaking weight must not be less than 52,000 pounds per square inch, and the corresponding extension of length at least 9 per cent., nor must any test crosswise with a round strip give less than 44,000 pounds per square inch, nor an extension of less than 6 per cent.

In these tests the strips will be cut from a certain number of sheets taken at hazard, observing that from each sheet or plate there shall be an equal number of strips or bands in the direction of the rolling as at right angles to it. These strips must be cut from the plate by sawing or drilling, (not *punched*,) and be trimmed and filed down to the size, so as to have for each section of rupture a rectangle of which one of the sides shall be  $1\frac{1}{2}$  inches in breadth, and the other the thickness of the plate. The length of the prismatic part submitted to traction must be 8 inches. These slips can be tested by means of weights acting directly, or by a system of levers marked with care, and the weights increased until they break. The initial weight will be calculated to produce an effect of traction of 44,000 pounds per square inch of section. This weight should be sustained for five minutes, when additional weights will be added at equal intervals of about one minute, in the proportion of 400 pounds per square inch until the sample breaks. There will be noted against each weight the corresponding elongation from the original prismatic length of 8 inches.

All plates must be carefully searched for blisters, flaws, laminations, and bad places caused by cinder or dirt, and likewise tested by sound with a small hammer, and be bent cold, at a distance of 6 inches from the edges, to an angle of  $60^{\circ}$ , for a plate three-eighths inch in thickness, varying in the proportion of  $8^{\circ}$  for each one-eighth inch in thickness, to  $20^{\circ}$  in a plate of one inch, showing no strain or fracture. These tests must be repeated for each thickness of iron, and from as many plates as may be considered necessary, and if the tests are not satisfactory the entire lot from which the samples have been taken will be rejected.

#### ANGLE-IRON.

*Hot test.*—There will be made from a piece of angle-iron, taken at hazard from each delivery of 50 bars, a cylindrical sleeve or pipe, on which one of the sides of the angle-iron remains in a plane perpendicular to the axis of the cylinder made by the other side. The inside diameter of the cylinder to be four times the width of the side which remains flat. Another piece, cut from another bar, to be opened until the angle formed by the two outside faces shall be  $145^{\circ}$ , and another piece from another bar to be closed up until the angle formed by the two exterior faces shall be  $35^{\circ}$ .

It will further be tried if these bars can be easily welded and

make a good weld. The pieces thus tested must not show either blister, tear, or cracks, indicating imperfect manufacture.

*Cold test.*—There will be cut from the sides of a certain number of bars, taken at random, bands or strips, having a section of rupture as nearly rectangular as practicable, the thickness being that of one side of the angle-iron, and the width  $1\frac{1}{2}$  inches; the length of the part submitted to traction to be 8 inches.

The initial load must be calculated to produce an effort of 50,000 pounds per square inch of section.

No strip apparently sound should break under this load, which will be continued five minutes, and should occasion an elongation of not less than 7 per cent. of the prismatic length. Additional weights will then be added at equal intervals of about one minute, until the sample is broken. These additional weights should be in the proportion of 400 pounds to the square inch.

Record will be made for each weight of the corresponding elongation for the original length of 8 inches. The mean of these tests, not less than 5 in each delivery of 50 bars, must not be less than the following: Mean breaking weight, per square inch, 54,000 pounds; elongation corresponding to that strain, 10 per cent. A bar must be broken cold to exhibit the fractured section. These tests must be repeated for each size, and from as many bars as may be considered necessary, and if the tests are not satisfactory the entire lot from which the samples have been selected will be rejected.

#### T-IRON AND DOUBLE-I.

*Hot test.*—In the double-T iron, the end of a bar, taken at hazard from each delivery of thirty pieces, will be split when cold with a chisel making a longitudinal cut in the center of the vertical web, dividing it into two equal parts for a length equal to three times the height of the bar, punching a hole at that distance from the end to prevent the slit from extending further. These two parts will then be separated, bending them back while hot, until one of the extremities is separated from the other a distance equal to the height of the double T-iron.

For the single T-iron the end of the bar selected for trial will be bent cylindrically, leaving the vertical web in its original plane, and thus forming with the cross-web a quarter of a cylinder, of which the inside radius shall be equal to five times the total height of the T-iron. The pieces thus tested must not show crack, tear, or blister, and as many bars as may be considered necessary are to be tested.

*Cold test.*—Strips will be cut from the vertical and horizontal webs of a certain number of bars, taken at hazard at each delivery of thirty pieces, to have nearly a rectangular section, the thickness to be that of the webs and the breadth  $1\frac{1}{2}$  inches; the length of the prismatic part submitted to traction to be 8 inches.

The weight to be first applied must be calculated to produce an effect of traction of 50,000 pounds to the square inch of cross-section, and no strip apparently sound should heat under the load, which will be continued five minutes, and the extension should not be less than 7 per cent. Additional weights will then be added at equal intervals of about one minute, in the proportion of 400 pounds per square inch.

There then will be recorded with each weight the elongation caused by it from the original length of 8 inches.

The mean result of these tests, at least five in number, for each delivery of thirty pieces, should not be less than the following: Mean break-

ing weight per square inch of section, 54,000 pounds; elongation corresponding to that weight, 10 per cent. These tests must be repeated in the different sizes and upon as many bars as may be considered necessary, and if the tests are not satisfactory the entire lot from which the samples have been selected will be rejected.

#### RIVETS.

*Hot test.*—The heads must be flattened out very thin, without cracks on the edges; the shank must be flattened out, and a punch driven through it, without showing any crack or tear.

*Cold test.*—The shank to be bent and doubled up cold, and to be nicked on the side and similarly bent and broken to show the nature of the fracture.

The actual weight delivered under any contract or agreement must not vary more than 5 per cent. from the estimated or standard weight, which will be taken at ten pounds per square foot for every one-fourth inch in thickness.

In the case of angle-iron, one foot in length will be assumed to equal the weight of a plate one foot long, of the same nominal thickness as the angle-iron, and of a breadth equal to the sum of the breadth of the two flanges, less the thickness.

Respectfully submitted.

DAVID D. PORTER, *Admiral.*

Hon. GEO. M. ROBESON,  
*Secretary of the Navy.*

#### NAVAL ACADEMY.

NAVAL ACADEMY, ANNAPOLIS, MARYLAND,  
*October 27, 1871.*

SIR: I have the honor to submit the usual annual report of the superintendent of the Naval Academy. The estimates for the fiscal year ending June 30, 1872, were forwarded to the Department on the 29th ultimo.

The whole number of cadet-midshipmen in the several classes at the beginning of the academic year was 246, as follows:

	Members.
First class.....	51
Second class.....	36
Third class.....	49
Fourth class.....	110
Total.....	246

and two Japanese students.

The course of study prescribed by the regulations was, with some minor changes made with the approval of the Department, carried out with reasonably good success until the 20th of May last, when the annual examination of the several classes commenced and continued on each secular day, in the presence of the board of visitors, until the 6th of June, when it was concluded.

Forty-seven members of the first class graduated and were detached from the Academy for active service; two resigned; one was granted sick leave and transferred to the next lower class, one found deficient, and re-examined on the return of the practice-ships, passed -

satisfactory examination and was detached; 26 members of the second-class, 36 members of the third-class, and 55 members of the fourth-class having passed successful examinations were, with those of the several classes who were recommended to be turned back into next lower classes, embarked in the practice-ships *Constellation* and *Saratoga*, preparatory to the summer's cruise.

On the 17th of June the *Constellation*, under the command of Captain Samuel P. Carter, and the *Saratoga*, commanded by Commander Joseph S. Skerrett, sailed from the Academy with a total of 145 cadet-midshipmen, and two Japanese students aboard, distributed as follows: *Constellation*, 86; *Saratoga*, 61.

The ships, during the summer, visited Lynn Haven Bay, Martha's Vineyard, and Nantucket Sound, Halifax, Nova Scotia; Provincetown, Massachusetts; Portland, Maine; Gardiner's Bay, Long Island Sound; New London, Connecticut; Narragansett Pier and Newport, Rhode Island. They returned to the Chesapeake on the 8th of September, and to Annapolis on the 27th—the interval having been employed in valuable practical exercises in the bay. For more full information in regard to the particulars of the summer's cruise, I beg leave to refer you to the reports of Captain Carter and Commander Skerrett, from which it will be seen that they have sufficient reasons for the opinion held that the summer was most usefully spent in furthering the professional education of the young gentlemen committed to their charge.

I am satisfied of the advantages to be gained by the cadet-midshipmen in confining the cruising-ground of the practice-ships to our own coast, instead of starting them on long passages to Europe; for during the last summer the whole time, save in unfavorable weather, could be devoted to useful exercises, and as no sacrifices had to be made in order to be at certain distant points at given times, all winds, fair and foul, could be used in furthering the professional education of the young gentlemen.

The examination of candidates for admission to the Academy as cadet-midshipmen commenced on the 5th of June, when 42 reported for examination, 1 of whom was rejected by the medical board, 11 by the academic board, 1 left pending the examination, and 1 declined the appointment after having been pronounced qualified, leaving 28 who were admitted. In addition, a Japanese student was received.

The examination of candidates for admission as cadet-engineers commenced on the 15th and was concluded on the 28th of September; during this time 41 presented themselves for examination, 4 of whom were rejected by the medical board, 4 withdrawn, and 33 examined, and a report of their proficiency, arranged in order of general merit, was prepared and transmitted to the Department.

These gentlemen were, for the first time in the history of the Academy, subjected to a thorough competitive examination, and I regret to say that, notwithstanding the age at which they enter, but 8 of them passed satisfactory examinations, according to the scale of merit which obtains in the Academy, viz, using 4 as the maximum, and could be considered as duly qualified, under the regulations, for admission; of this number 17 have been appointed, and I have ordered them to return to the Academy without delay; this number, it is believed, will be amply sufficient at this time to meet the wants of the service.

On the 20th of September the examination of candidates for admission as cadet-midshipmen was resumed; 54 presented themselves for admission, 2 of whom were rejected by the medical board, 10 by the academic board, and 1 was withdrawn, leaving 41 who were admitted,



making the number found qualified in June and September 70, and the total number of students in the Academy, on its re-opening, 216 cadet-midshipmen and 3 Japanese students.

Before closing this report, I beg to call the attention of the Department to the recommendation made by the academic board on the 13th of June, 1870, in favor of giving appointments to naval cadets a year in advance of the time at which they are to report for examination, as is now and has for some time been the case at the United States Military Academy.

The advantages of the proposed change I need not enumerate further than to state that, in my opinion, by giving the appointees a whole year in which to prepare for their first examination, those from the West and South will be placed more nearly on a footing with their more favored fellows who come from portions of the country where educational advantages are greater and more general, and as a result there will be fewer cases of failure and consequent mortification to both candidates and their friends, aside from the great good they must derive throughout the entire course from being better prepared on entering the Academy than is, as a rule, the case at present.

I have the honor to be, sir, respectfully, your obedient servant,

JOHN L. WORDEN,

*Commodore and Superintendent Naval Academy.*

Hon. GEORGE M. ROBESON,

*Secretary of the Navy.*

## BUREAU OF ORDNANCE.

BUREAU OF ORDNANCE, NAVY DEPARTMENT,

October 12, 1871.

SIR: The Bureau has the honor to submit its annual report, with accompanying estimates for the fiscal year commencing July 1, 1872.

With the exception of the 10,000 Remington rifles manufactured at the Springfield armory, and which have been paid for out of balances remaining in the Treasury at the date of the contracts, the expenditures of the Bureau since its last annual report have been confined to the objects specified in the appropriations, a large proportion being for the ordnance equipment of ships ordered into commission and for necessary repairs.

The 5,000 barrels of cannon-powder authorized in the appropriation for the year ending June 30, 1871, have been delivered by the contractors and paid for from that appropriation.

The experiments and reported results thereof in Europe with prismatic powders, and powders of very large grain, although not exceeding those already obtained in our own country, have nevertheless been considered of sufficient importance to induce the Bureau to undertake a further examination of the subject. To this end it has detailed an officer to superintend the manufacture of a number of barrels of such powders at the mills of the Messrs. Dupont at Wilmington, Delaware, which, when completed, will be fired for velocities, pressures, &c., at Fortress Monroe. In this work the Army ordnance will afford the necessary assistance and join in solving the problem. At present, however, we have no reason to suppose that we are behind European powers in this matter.

The ten XV-inch guns, authorized by the same act, are now in course of fabrication; but those granted by the appropriation for the *present* fiscal year have not yet been ordered.

Many improvements have been made in the details of the new iron pivot-carriages for XI-inch guns, and each one of the ships ordered into commission during the year, and carrying these guns, have been furnished with an iron carriage. The gradual exclusive use of iron for both broadside and pivot is believed to be warranted by the results of service, and whenever the wooden ones are worn out they will be replaced by iron.

The Remington rifles are being distributed to the service to the exclusion of all other small arms, including the withdrawal of the carbine, which, having no bayonet, is not as effective as the rifle, and is therefore an unnecessary multiplication of the same arm on board ship. Six hundred of the rifles are now in the Asiatic Squadron, a sufficient number to fully arm each ship on that station.

The only embarrassing question in connection with these arms—not exceptional, but common to all breach-loaders—is that of the metallic cartridge. Of these there are many devices, each claiming a degree of excellence over its competitor; the Bureau, although relying at present upon the beautiful product of the Army arsenal at Frankford—where excellence of workmanship is guaranteed by an intelligent and rigid inspection on the part of the officers of the Ordnance Corps—it has nevertheless placed in service cartridges made by outside inventors and manufacturers, with the view of obtaining the very best ammunition which can be produced.

To the Navy, however, the subject is one of minor importance—its peculiar arm is the heavy gun on board ship—the small arm, (musket, rifle, &c.,) belongs to the Army as a specialty, and whenever a final decision as to the best cartridge is made by the Army Ordnance Bureau, based upon the results of actual service in the field, the Navy may accept such decision as conclusive.

In compliance with the act of Congress, the Bureau has entered into an agreement with the Gatling Gun Company for the purchase of twenty-five of these guns. The manufacture is now going on at the Colt's Arm Manufacturing Company in Hartford, and it is expected that we shall soon be able to ascertain by experiments whether the endurance and mechanism of the machinery is such as will stand all the trials and vicissitudes of naval service; and whether they can be safely substituted for the well-tried and efficient 12-pounder boat howitzer in the smaller cutters.

The operations of the torpedo station have been highly satisfactory, and the progress made in the details of this important branch of the ordnance service warrant me in recommending the estimates for its support to the favorable consideration of the Department and of Congress.

The course of instruction for the young officers is thorough and systematic, and the very best results are anticipated from the knowledge thus obtained.

The secrecy which it is obviously necessary to maintain concerning the operations of this station precludes my reporting any of the details in a public document. I may remark, however, that recently a torpedo was exploded with the utmost ease and certainty from the bow of an ordinary frigate's launch, containing 164 pounds of powder, its depth of immersion being  $13\frac{1}{2}$  feet and the horizontal distance from the stem of the boat only  $18\frac{1}{2}$  feet. With the exception of shivering the end of the

spar and sending the boat astern some 8 or 10 feet, no injury or inconvenience was experienced; the force of the explosion may readily be imagined.

It is in such experiments as these that the school of young officers is constantly engaged, having first themselves prepared the torpedoes, fuses, &c., so that in actual service all the details and the development of this terrible agent of destruction will be as familiar to them as any other routine of their profession.

From this brief reference to the subject of torpedoes it may be inferred that when the hulls and the engines of the boats authorized by Congress to be built for this exclusive service are finished, the equipment of the torpedo will be thoroughly arranged and in readiness to be applied.

I feel it my duty to again call attention to the paramount necessity for a new experimental battery, and to suggest that the naval committee of Congress be urged to obtain the necessary legislation for it. In my last annual report I drew the attention of the Department to this subject in the following words:

Before the war the battery in the Washington navy-yard answered to a limited extent the purpose of firing for range, testing fuses, &c., subject at all times, however, to repeated delays and interruptions from passing vessels and the operations of the navy-yard. These obstacles were, of course, multiplied during the war, and prevented entirely the making from that battery of the very important experiments upon iron targets. To do this it was therefore necessary to plant a battery on the opposite side of the river, upon the property of the Insane Asylum, which, however, was very much circumscribed in its operations, produced only partial results, and was finally abandoned at the request of the superintendent of the asylum, who needed the ground for other purposes.

Since the war, commerce upon the river has increased, and many dwellings have been erected on its shores, rendering practice from the navy-yard battery highly dangerous. In fact, the firing of loaded shells cannot be carried on. Under these circumstances, it is imperatively necessary that immediate steps should be taken to secure some suitable location for a permanent experimental battery, embracing a clear and unobstructed range of at least six miles, and with a sufficient breadth to admit of the erection of targets and the necessary appliances for conducting experiments.

An open beach of hard sand would be preferable for many reasons; and the spot selected should be sufficiently near to railroad or water communication for the easy transportation of guns, targets, and supplies of all kinds.

Our present condition is really a virtual abandonment of all effort to solve the great ordnance questions of the day. Even the smaller states of Europe are greatly in advance of us in experimental practice; and the evidences are that unless we bestir ourselves we will shortly be left behind in the race for supremacy in ordnance.

The situation remains unchanged, and to-day we are absolutely standing still, while every nation in Europe is steadily improving its ordnance by the very means here alluded to.

My predecessors in office have also frequently called attention to the present location of the naval magazines, with the view of their removal from the neighborhood of large cities. This question is about to be brought to direct issue by the action of the territorial legislature of this District, so far as our magazine on the Eastern Branch of the Potomac is concerned; and I would recommend that it be made to embrace the magazines at the other stations. The subject has already been brought to the notice of Congress by Senator Frelinghuysen, and a resumption of it at this time would seem to be warranted by the calamities which have recently occurred from magazine explosions in England and elsewhere.

In anticipation of the removal of the magazine at this station, situated as it is within a short distance of the Capitol, I have inserted an estimate of \$200,000, for the purchase of not less than two hundred acres of land and for the erection thereon of new magazines, and all the necessary buildings required for ordnance purposes, including a pyrotechni-

cal laboratory. The buildings at present occupied in the Washington navy-yard could then be vacated and used by other departments.

The location of this land can also be made to embrace the beach and range-ground referred to in a preceding paragraph of this report.

The next removal in importance is the magazine at Norfolk, for which, and the erection of a new one on the island of St. Helena, opposite the Gosport navy-yard, already belonging to the United States, I have made an estimate of \$50,000. The pressing necessity for this appropriation is made manifest by the danger represented in the accompanying report (marked A) of an accident which has already occurred at that station, and which may again occur at any moment with the most disastrous consequences.

I have the honor to be, with high respect, your obedient servant,

A. LUDLOW CASE,  
*Chief of Bureau.*

Hon. GEORGE M. ROBESON,  
*Secretary of the Navy.*

## BUREAU OF EQUIPMENT AND RECRUITING.

NAVY DEPARTMENT,  
BUREAU OF EQUIPMENT AND RECRUITING,  
*Washington, October 31, 1871.*

SIR: I have the honor to submit the annual report of the operations of this Bureau, together with the estimates for the fiscal year ending June 30, 1873:

During the past fiscal year 25 vessels were equipped for sea; 13 for coast and harbor service, and 14 partially equipped and not completed at close of fiscal year, at an expense, including cost of labor and materials, of \$1,249,064 98.

An estimate for the setting up of the machinery, purchased two years ago, for the manufacture of wire rope will be submitted in the report of the chief of Bureau of Yards and Docks, and is earnestly recommended, as it is in every way desirable that the Bureau should manufacture wire rope, as well as hemp, for naval vessels.

The rope-walk at Boston has furnished all the hemp, manila and hide cordage required for naval use, as follows: 591,442 pounds hemp rope, at a cost of \$144,734 58; 487,164 pounds manila rope, at a cost of \$97,432 80; 24,851 pounds hide rope, at a cost of \$24,851. There has been purchased during the last fiscal year 1,284,660 pounds manila hemp, costing \$219,707 10.

Coal-sheds for the protection of coal belonging to this Bureau, at the different navy-yards, are much needed. An estimate for this purpose, at the Brooklyn navy-yard, is included in report of Bureau of Yards and Docks. During the past fiscal year 28,000 tons of coal were consumed by 46 vessels.

The number of men allowed by law has been kept up but not exceeded. The Bureau recommends the enlistment of three hundred men for the practice ships of the Naval Academy; a proviso for this purpose passed the House of Representatives the last session of Congress, but was not reached in the Senate. The former recommendations of the Bureau, as to furnishing enlisted men with an outfit on entering the service, and as to apprehending deserters after the time of their enlistment has

expired, and causing them to serve out their lost time, as is the case in the Army, are respectively renewed.

I have the honor to be, very respectfully, your obedient servant,

WM. REYNOLDS,  
*Chief of Bureau.*

HON. GEORGE M. ROBESON,  
*Secretary of the Navy.*

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## BUREAU OF YARDS AND DOCKS.

BUREAU OF YARDS AND DOCKS,  
*October 27, 1871.*

SIR: In obedience to your orders of the 9th of September and 13th of October, I have the honor to submit the annual report of the operations at the several navy-yards and stations during the fiscal year ending 30th June, 1871, coming under the cognizance of this Bureau, with estimates for improvements and repairs for the fiscal year ending 30th June, 1873.

I beg leave to invite your especial attention to the amounts asked for repairs of the floating docks at Kittery, Maine, and at Mare Island, California. These docks are the only means under control of the Department for repairing heavy ships requiring docking at those yards; they have been in use nearly twenty years, and being constructed principally of wood, are now in such condition of decay as not to be reliable, and should they fail in an attempt to raise a vessel, the failure might be attended with serious loss of property and perhaps life.

The dock at Kittery has never received any very thorough repairs; that at Mare Island has been partially repaired, but to render it capable of raising a heavy ship, the amount asked for is necessary. The appropriations asked for the repairs of these two docks are considered of first importance.

The importance of the Kittery yard has been increased by the policy of the Navy Department in recognizing it as not only a valuable yard for ordinary purposes, but for sanitary purposes also, and as a suitable place for the repair of vessels long exposed to the pernicious influences of the West India climate.

The navy-yard at Mare Island, with its facilities for docking vessels, is rendered of increased importance by our growing commerce on the Pacific, and the dependence of our Asiatic and Pacific fleets upon it.

The only work of magnitude which it is proposed to commence at any of the old established yards, is a permanent stone dry-dock at Mare Island. It is believed that such a dock can be built at that yard at a reasonable cost, and the experience of the past proves the inefficient, unsafe, and expensive character of docks constructed of perishable materials.

The Bureau has estimated for funds to carry into more complete, general, and perfect operation the system of yard railroads, which has been to a limited extent introduced in some of the navy-yards. One of our most fruitful causes of expense is the transportation of heavy articles, such as guns, anchors, boilers, machinery, &c., and in bad weather, when the roads are not in good condition, the transportation of all articles, especially coals and such as above named, is expensive and attended with much loss of time. The cost of maintaining the necessary teams

constitutes one of the largest items of expenditure under the contingent fund, and if the yards were well supplied with rail-tracks, cars, &c., the result would be great saving of time and money. This object is considered one of much importance and is strongly commended to favor.

The total inefficiency of our navy-yards to furnish the means of contending with a foreign maritime nation was fully exhibited in our recent war, when, although the participants in the rebellion could bring no naval force of magnitude to oppose the Government, it was obliged to call upon almost every important ship-yard and machine-shop in the country to aid in the preparation of vessels to guard our coast and blockade that of the revolting States. As has been heretofore stated, our yards are too limited in extent, and but few of them are capable of being enlarged; the only stations which are of ample dimensions for a great naval station are League Island, on the Atlantic, and Mare Island, on the Pacific coasts; and it would seem a wise policy to follow the example of European naval powers, by providing dock-yards, dry-docks, machine-shops, and other necessary establishments of such magnitude as to supply the chief wants of the naval service during time of war.

In our eight navy-yards (seven on the Atlantic and one on the Pacific) we have but three permanent stone dry-docks and three wooden floating docks. The accommodations for founderies, machine-shops, armor-plating shops, boiler-shops, and building-slips are extremely limited and not equal to the facilities afforded by either of the great establishments of Great Britain, at Portsmouth, Plymouth, or to that now in progress at Chatham.

In the ship-yard of the Messrs. Laird, at Birkenhead, unhappily notorious during our rebellion, I found no less than five dry-docks of solid masonry, (two more than we have for our whole Navy,) in one of which the longest iron-clad of the British navy, the *Agincourt*, was built.

The English admiralty is now expending a grant of thirty millions of dollars in increasing its dock-yard facilities.

At Chatham, new basins in solid masonry, with a depth of water of 30 feet, covering an area of seventy acres, are now finished or in progress. Those at Portsmouth are of even greater magnitude, and these dock-yards, as well as that at Plymouth, are rich in labor-saving machinery and other resources beyond the conception of our countrymen. At Wilhelmshafen the Germans have already expended \$9,000,000, and works to cost as much more are in progress, while at Kiel they have now begun a naval establishment of similar magnitude.

The French have enormous dock-yards; and the Italians at Spezia have far advanced in the creation of one of the greatest dock-yards in the world. It already contains a wet-dock of vast extent, upon which open four stone dry-docks of the first character, and six more are to be built.

The policy of this country is peaceful; our position removes us from many of the complications of the Old World, but we shall be doubly safe from war if we be ready for it. War henceforward will be of swift development; the blows struck will be sharp and sudden, and it will, perhaps, be too late for preparation when it comes. It is for Congress to decide whether the pitiable lack of resources at our navy-yards shall continue to invite aggression from hostile fleets. Our country has resolved upon small armaments, but those we have should be excellent in their kind, and capable of rapid expansion.

In deference to your desire for severe retrenchment, I ask very little

improvements during the coming fiscal year, but I must strongly reiterate the necessity for the appropriations I have enumerated, especially Mare Island.

As Congress has accepted League Island, it seems wise to develop the resources of that navy-yard, which, situated in the region of iron and coal, with its fresh water for the preservation of our iron vessels, its great manufacturing facilities, and its security from hostile approach, affords so many of the great essentials of a naval establishment of the present day.

The following will show the amounts expended at the various navy-yards and stations during the fiscal year ending 30th June, 1871, with estimates for improvements and repairs during the fiscal year ending 30th June, 1873.

#### KITTERY, MAINE.

The amount expended under the head of "Navy-yard, Kittery," during the fiscal year ending June 30, 1871, is: For materials, \$7,385 92, and for labor \$46,987 88, making an aggregate of \$54,373 80.

The amount expended under the head of "Civil Establishment" is \$11,904 01. The amount expended during the fiscal year for objects coming under the head of "Contingent" is \$81,511 52.

Estimates are submitted for the fiscal year ending June 30, 1873: for navy-yard, Kittery, Maine, \$199,200; for civil establishment at navy-yard, Kittery, Maine, \$10,200.

#### CHARLESTOWN, MASSACHUSETTS.

The amount expended at this yard under the head of "Navy-yard, Charlestown, Massachusetts," during the fiscal year ending June 30, 1871, is: For materials, \$34,588 03, and for labor, \$68,031 46, making an aggregate of \$102,589 49.

Under the head of "Emergencies at Naval Stations," there has been expended for materials \$22,083 91, and for labor, \$27,321 94, making an aggregate of \$49,405 85.

The amount expended under the head of "Civil Establishment" is \$11,473 34. The amount expended under the head of "Contingent" is \$147,161 10.

Estimates are submitted for the fiscal year ending June 30, 1873: for navy-yard, Charlestown, Massachusetts, \$127,900; for civil establishment at navy-yard, Charlestown, Massachusetts, \$12,700.

#### BROOKLYN, NEW YORK.

The amount expended under the head of "Navy-yard, Brooklyn, New York," during the fiscal year ending June 30, 1871, is: For materials, \$87,554 60, and for labor, \$240,383 43, making an aggregate of \$327,938 03.

The amount expended under the head of "Civil Establishment" is \$9,998 50. The amount expended under the head of "Contingent" is \$27,778 15.

Estimates are submitted for the fiscal year ending June 30, 1873: For navy-yard, Brooklyn, New York, \$170,000; for civil establishment at navy-yard, Brooklyn, New York, \$12,600.

#### PHILADELPHIA, PENNSYLVANIA.

The amount expended under the head of "Navy-yard, Philadelphia,"

during the fiscal year ending June 30, 1871, is: For materials, \$12,682; and for labor, \$18,024 85, making an aggregate of \$30,109 34.

The amount expended under head of "Civil Establishment" \$9,199 77. The amount expended under the head of "Contingent" \$87,874 12.

Estimates are submitted for the fiscal year ending June 30, 1872: For navy-yard, Philadelphia, Pennsylvania, \$40,000; for civil establishment, navy-yard, Philadelphia, Pennsylvania, \$9,200.

#### WASHINGTON, DISTRICT OF COLUMBIA.

The amount expended under the head of "Navy-yard, Washington, D. C.," during the fiscal year ending June 30, 1871, is: For materials, \$5,744 79, and for labor, \$44,393 64, making an aggregate of \$50,138 43. Under the appropriation for "Emergencies at Naval Stations," there has been expended for materials \$2,822 60, and for labor \$2,774 34, making an aggregate of \$5,596 94.

The amount expended under the head of "Civil Establishment" \$10,200. The amount expended under the head of "Contingent" \$96,707 42.

Estimates are submitted for the fiscal year ending 30th June, 1872: For navy-yard, Washington, District of Columbia, \$126,000; for civil establishment, navy-yard, Washington, District of Columbia, \$10,200.

#### NORFOLK, VIRGINIA.

The amount expended under the head of "Navy-yard, Norfolk, Virginia," during the fiscal year ending June 30, 1871, is: For materials, \$8,301 12, and for labor \$37,972 11, making an aggregate of \$46,273 23.

The amount expended under the head of "Civil Establishment" \$8,195 12. The amount expended under the head of "Contingent" \$76,403 65.

Estimates are submitted for the fiscal year ending June 30, 1872: For navy-yard, Norfolk, \$142,000; for civil establishment, navy-yard, Norfolk, \$7,400.

#### PENSACOLA, FLORIDA.

The amount expended under the head of "Navy-yard, Pensacola, Florida," during the fiscal year ending June 30, 1871, is: For materials, \$16,660 02, and for labor, \$22,594 96, making an aggregate of \$39,254 98.

The amount expended under the head of "Civil Establishment" \$4,785 73. The amount expended under the head of "Contingent" \$29,894 83.

Estimates are submitted for the fiscal year ending 30th June, 1872: For navy-yard, Pensacola, \$50,000; for civil establishment, navy-yard, Pensacola, \$5,100.

#### MARE ISLAND, CALIFORNIA.

The amount expended at this yard during the fiscal year ending June 30, 1871, under the head "Navy-yard, Mare Island, California," is: For materials, \$38,460 23, and for labor, \$106,016 46, making an aggregate of \$144,476 69.

The amount expended under the head of "Civil Establishment" \$15,298 56. The amount expended under the head of "Contingent" \$184,321 92.



Estimates are submitted for the fiscal year ending June 30, 1873: for navy-yard, Mare Island, California, \$462,000; for civil establishment, navy-yard, Mare Island, California, \$10,675.

#### SACKETT'S HARBOR, NEW YORK.

The amount expended during the fiscal year ending June 30, 1871, under the head of "Naval Station, Sackett's Harbor," is \$693 30. The amount expended under the head of "Contingent" is \$66 32.

Estimates are submitted for the fiscal year ending June 30, 1873: for naval station, Sackett's Harbor, \$1,000.

#### MOUND CITY, ILLINOIS.

The amount expended under the head of "Naval Station, Mound City," during the fiscal year ending 30th June, 1871, is: For materials \$5 54, and for labor \$2,601 25, making an aggregate of \$3,226 79. The amount expended for objects coming under the head of "Contingent" is \$11,932 37.

Estimates are submitted for the fiscal year ending June 30, 1873: for naval station, Mound City, \$15,000.

#### NEW LONDON CONNECTICUT.

The amount expended at this station during the fiscal year ending June 30, 1871, under the head of "Contingent" is \$1,421.

Estimates are submitted for the fiscal year ending June 30, 1873: for naval station, New London, \$5,000.

#### LEAGUE ISLAND, PENNSYLVANIA.

The amount of expenditures at this station under the head of "Emergencies at Naval Stations," during the fiscal year ending June 30, 1871, is \$1,765 40. The amount expended under the head of "Contingent" is \$7,632 11.

Estimates are submitted for the fiscal year ending June 30, 1873: for naval station at League Island, \$15,000; for civil establishment at League Island, \$5,800.

#### KEY WEST.

The amount expended at this station for general repairs during the fiscal year ending June 30, 1871, is \$4,600.

Estimates are submitted for the fiscal year ending June 30, 1873: for repairs of wharves, buildings, &c., \$30,000.

#### EMERGENCIES AT NAVAL STATIONS.

Under this head, as before stated, there has been expended at the several navy-yards, during the fiscal year ending June 30, 1871, the sum of \$8,768 19. These expenditures have been made at Charlestown, in completing the repairs of the wharves, commenced the year before; at Washington, in repairing floor of joiner's shop, and at League Island, in repairing dikes injured by floods.

Estimates are submitted for the fiscal year ending June 30, 1873: for emergencies at naval stations, \$100,000.

## NAVAL ASYLUM, PENNSYLVANIA.

On the 1st of July, 1870, there were 144 persons, including officers and attendants, borne on the rolls of the asylum; during the fiscal year ending June 30, 1871, 17 beneficiaries have been admitted; 5 have died. The expenses of the institution for the support of the beneficiaries and pay of officers and attendants during the fiscal year, are:

For subsistence.....	\$18,000
For clothing, tobacco, &c.....	5,000
For miscellaneous items.....	6,500
For officers and attendants.....	25,000
	<hr/>
	60,500

The total amount estimated for the support of the institution during the fiscal year ending June 30, 1873, is, for the annual repair of buildings, improvements of cemetery, and support of beneficiaries, \$65,100, which by law, is paid out of the naval pension fund.

## TIMBER LANDS.

For the protection of these lands, and the prosecution of depredators, an appropriation of \$5,000 is asked.

## CONTINGENT.

The amount expended at the several navy-yards and stations under this head during the fiscal year ending June 30, 1871, is \$851,967 90.

Estimates are submitted for the fiscal year ending June 30, 1873, for contingent expenses at navy-yards and stations, amounting to \$950,000.

The aggregate amount estimated at the yards far exceeds the amount submitted, but it is believed that by an economical and watchful care over the expenditures under this head, the amount submitted may be made to meet the proper demands upon it; less than that amount will subject the Bureau to great embarrassment in supplying the means to provide for the payment of indispensable charges against this appropriation.

Respectfully, your obedient servant,

C. R. P. RODGERS,  
*Chief of Bureau*

Hon. GEORGE M. ROBESON,  
*Secretary of the Navy.*

## BUREAU OF NAVIGATION.

## NAVY DEPARTMENT.

*Bureau of Navigation, October 23, 1871.*

SIR: I have the honor to submit the following report of the Bureau of Navigation for the past year, together with estimates for its support and for the expenditures that will probably be required in that division of the naval service committed to its immediate charge, for the fiscal year ending June 30, 1873. Included in this report, and transmitted herewith, are the reports and estimates of the Superintendents of the Naval Observatory and Nautical Almanac, of the Hydrographer to the Bureau in charge of the Hydrographic Office, and of the Chief Signal Officer of the Navy.

## I.—NAVIGATION.

*Navigation supplies.*—The liquid compasses, as made in this country, have been adopted for the Navy. An experience of several years has demonstrated that they may replace, with great advantage, the dry or dry compasses hitherto in use. The latter, of which a sufficient stock is on hand, are still issued as spare instruments; but the standard compasses, as well as those by which the ships' course is steered, are now liquid. From their peculiar construction, these compasses not only admit of a high degree of polar force, but with all the steadiness that can be desired they possess great sensibility. These conditions, with the various provisions for maintaining them unimpaired during an extended voyage, appear to justify the high opinion entertained of this form of compass by officers who have used them afloat, and their substitution for the ordinary compass by this Bureau.

With the exception of binocular and other spy-glasses, and an occasional sample specimen, no other nautical instruments are now procured from foreign sources for the use of the Navy. Hitherto no successful effort, from a commercial point of view, has been made in this country to produce this class of optical instruments; hence our dependence on foreign manufacture in this particular.

No further remark appears to be called for at this time in relation to other navigation supplies.

## II.—HYDROGRAPHY.

We are naturally indebted, as a young nation, to Great Britain and France especially, and to the other maritime nations of Europe, for most of our charts necessary to the safe navigation of the high seas; and this is the less to be wondered at, as the extent and intricacy of our own coasts on both oceans is so great as to require time and the expenditure of large sums of money to survey them with the necessary accuracy. The surveying expedition under the command of Commander Wilkes, and a more recent one under the command of Commander Rodgers especially, furnished much information within their sphere of examination, but no equivalent for what we have obtained. This would suggest the propriety of an agreement on our part with other nations to take up the survey of such seas as are not in progress of survey by them, and, if possible, adjacent to our own coasts; such, for example, as the survey of the North Pacific, its islands, shoals, and reefs, correcting longitudes, and combining what is already known, so that that extensive sea can be navigated with increased safety.

Under an appropriation of Congress for that purpose, a thorough exploration of all the water-sheds on the Isthmus of Darien, from both oceans, was made to such heights and such separation of points reached to the interior as to establish the inferiority of any of them for the construction of an inter-oceanic ship-canal to that of the immediate vicinity of the Panama Railroad, as shown by surveys for its construction. The further prosecution of the object, by the same able and energetic officers, Commanders T. O. Selfridge and Lull, with many of the coordinates of their former examinations, was made in the winter of 1870 and 1871, south of the Isthmus proper, and with results establishing, perhaps without a doubt, the vicinity of the best locality existing for the construction of a ship-canal between the waters of the Atlantic and Pacific Oceans.

The recommended initial point on the Atlantic coast for the proposed

canal is one of the mouths of the Atrato, which would require deepening for a distance of half a mile, after which point the depth of water is abundant at all times for any class of vessels to the mouth of the Napipi, a distance of one hundred and sixty-five miles from the bar referred to, at an elevation of forty feet above the waters of the two oceans. A distance of thirty-two statute miles is necessary to reach the navigable waters of the Pacific, embracing a tunnel of four miles in length. An extraordinary and very favorable feature is, that the summit-level between the two oceans lies within less than three thousand feet of the navigable waters of Limon Bay, which could be made into a large and commodious harbor without expense, through the necessary transportation and deposition of the material taken out of the tunnel, should it be found, as supposed, that the construction of a ship-canal is commercially practicable. Your attention is called to the very creditable manner in which this laborious and intricate work has been performed by Commandant T. O. Selfridge and his subordinates, under all the disadvantages of climate and almost impenetrable forests.

In accordance with your instructions to supply everything that could be reasonably desired for the nautical and astronomical equipment of the "expedition to the North Pole," under the command of Captain C. F. Hall, the Bureau placed on board the *Polaris*, the vessel fitted for that expedition, ten chronometers, one portable transit, one occultation telescope, five sextants, one reflecting circle, and five artificial horizons, besides a supply of other nautical instruments and navigating instruments—all indeed that was asked—to meet the wishes of the commanding officer. The *Polaris* sailed from New York on the 29th of June, and was put finally to sea from New London, Connecticut, on the 3d of July. In view of the completeness with which this vessel was fitted for her destined service, and the well-known energy and perseverance of her commander, it is to be hoped that valuable additions to the hydrography of the regions penetrated will be made known by that expedition.

Several special surveys of designated localities, though generally of limited extent, have been made in the Pacific and its adjacent waters during the past year; some small local surveys have also been made. Opportunities occurred, in other parts of the world. But the deficiency of vessels available for this kind of service necessarily restricts all hydrographic operations, so that these occasional surveys can only be made from time to time, with due regard to the general interests of the Government, within the limits of our foreign naval stations.

### III.—HYDROGRAPHIC OFFICE.

The Hydrographer to the Bureau of Navigation in charge of the Hydrographic Office submits a statement of the progress made at that establishment during the past year.

The processes of projecting, drawing, and engraving navigating charts are necessarily expensive, and even under the most favorable circumstances can make but moderate progress. A small amount of the work has been done at the Hydrographic Office during the past year, but it has been restricted entirely to the production of original charts. The cheaper process of photo-lithographing has been employed with great success in reproducing improved editions of a number of foreign charts. By this means important additions have been made to our chart-list, which would otherwise have to be omitted, in the absence of sufficient appropriation for this object.

As indicated in former reports, the importance of increasing our chart-

## I.—NAVIGATION.

*Navigation supplies.*—The liquid compasses, as made in this country, have been adopted for the Navy. An experience of several years has demonstrated that they may replace, with great advantage, the dry or air compasses hitherto in use. The latter, of which a sufficient stock is on hand, are still issued as spare instruments; but the standard compasses, as well as those by which the ships' course is steered, are now liquid. From their peculiar construction, these compasses not only admit of a high degree of polar force, but with all the steadiness that can be desired they possess great sensibility. These conditions, with the various provisions for maintaining them unimpaired during an extended use, appear to justify the high opinion entertained of this form of compass by officers who have used them afloat, and their substitution for the ordinary compass by this Bureau.

With the exception of binocular and other spy-glasses, and an occasional sample specimen, no other nautical instruments are now procured from foreign sources for the use of the Navy. Hitherto no successful effort, from a commercial point of view, has been made in this country to produce this class of optical instruments; hence our dependence on foreign manufacture in this particular.

No further remark appears to be called for at this time in relation to other navigation supplies.

## II.—HYDROGRAPHY.

We are naturally indebted, as a young nation, to Great Britain and France especially, and to the other maritime nations of Europe, for most of our charts necessary to the safe navigation of the high seas; and this is the less to be wondered at, as the extent and intricacy of our own coasts on both oceans is so great as to require time and the expenditure of large sums of money to survey them with the necessary accuracy. The surveying expedition under the command of Commander Wilkes, and a more recent one under the command of Commander Rodgers especially, furnished much information within their sphere of examination, but to equivalent for what we have obtained. This would suggest the propriety of an agreement on our part with other nations to take up the survey of such seas as are not in progress of survey by them, and, if possible, adjacent to our own coasts; such, for example, as the survey of the North Pacific, its islands, shoals, and reefs, correcting longitudes, and combining what is already known, so that that extensive sea can be navigated with increased safety.

Under an appropriation of Congress for that purpose, a thorough exploration of all the water sheds on the Isthmus of Darien, from both ocean, was made to such heights and such separation of points reached in the interior as to establish the inferiority of any of them for the construction of an interoceanic ship canal to that of the immediate vicinity of the Panama Railroad, as shown by surveys for its construction. The further prosecution of the object, by the same able and energetic officers, Commanders T. O. Schridge and Lull, with many of the subordinates of their former examinations, was made in the winter of 1870 and 1871, south of the Isthmus proper, and with results establishing, perhaps without a doubt, the vicinity of the best locality existing for the construction of a ship canal between the waters of the Atlantic and Pacific Oceans.

The recommended initial point on the Atlantic coast for the proposed

canal is one of the mouths of the Atrato, which would require deepening for a distance of half a mile, after which point the depth of water is abundant at all times for any class of vessels to the mouth of the Napipi, a distance of one hundred and sixty-five miles from the bar referred to, and at an elevation of forty feet above the waters of the two oceans. A cut of thirty-two statute miles is necessary to reach the navigable waters of the Pacific, embracing a tunnel of four miles in length. An extraordinary and very favorable feature is, that the summit-level between the two oceans lies within less than three thousand feet of the navigable waters of Limon Bay, which could be made into a large and commodious harbor without expense, through the necessary transportation and deposition of the material taken out of the tunnel, should it be found, as is supposed, that the construction of a ship-canal is commercially practicable. Your attention is called to the very creditable manner in which this laborious and intricate work has been performed by Commander T. O. Selfridge and his subordinates, under all the disadvantages of climate and almost impenetrable forests.

In accordance with your instructions to supply everything that could be reasonably desired for the nautical and astronomical equipment of the "expedition to the North Pole," under the command of Captain C. F. Hall, the Bureau placed on board the *Polaris*, the vessel fitted for that expedition, ten chronometers, one portable transit, one occultation telescope, five sextants, one reflecting circle, and five artificial horizons, besides a supply of other nautical instruments and navigating implements—all indeed that was asked—to meet the wishes of the commanding officer. The *Polaris* sailed from New York on the 29th of June, but put finally to sea from New London, Connecticut, on the 3d of July. In view of the completeness with which this vessel was fitted for her destined service, and the well-known energy and perseverance of her commander, it is to be hoped that valuable additions to the hydrography of the regions penetrated will be made known by that expedition.

Several special surveys of designated localities, though generally of limited extent, have been made in the Pacific and its adjacent waters during the past year; some small local surveys have also been made, as opportunities occurred, in other parts of the world. But the deficiency of vessels available for this kind of service necessarily restricts all hydrographic operations, so that these occasional surveys can only be made from time to time, with due regard to the general interests of the Government, within the limits of our foreign naval stations.

### III.—HYDROGRAPHIC OFFICE.

The Hydrographer to the Bureau of Navigation in charge of the Hydrographic Office submits a statement of the progress made at that establishment during the past year.

The processes of projecting, drawing, and engraving navigating charts are necessarily expensive, and even under the most favorable circumstances can make but moderate progress. A small amount of this work has been done at the Hydrographic Office during the past year, but it has been restricted entirely to the production of original charts. The cheaper process of photo-lithographing has been employed with great success in reproducing improved editions of a number of foreign charts. By this means important additions have been made to our chart-list, which would otherwise have to be omitted, in the absence of sufficient appropriation for this object.

*As indicated in former reports, the importance of increasing our chart-*

product, up to the end of being able to supply from Government publications nearly all the charts required by the Navy, but all those needed by the commercial marine, is now, as heretofore, urged by this Bureau and it trusts that it will receive the consideration by Congress which it so justly deserves.

#### IV.—NAVAL OBSERVATORY.

The estimates for the support of the Naval Observatory are recommended to your favorable consideration. Its publications of the results obtained for the past few years have contributed much to the advancement of science in its special province, showing the ability and zeal of its personnel, composed almost entirely of naval officers, reflecting much credit upon the arm of service of which they are members, and placing the Naval Observatory in the front rank of such institutions.

It is to be hoped that the relative rank of the professors may be adjusted as recommended by the Superintendent in his report; their present position seems to be the result of an inadvertent omission in the bill regulating line and staff rank in the Navy, passed at the last session of Congress, which ought to be corrected, to give these useful officers their proper position in the service to which they belong.

#### V.—NAUTICAL ALMANAC.

The Superintendent of the Nautical Almanac, in his report of the past year's operations, sets forth in detail the progress of the work under his immediate charge. It will be seen that the preparation and publication of this work has been so far advanced that the abridged almanac for navigators was issued last fall, three full years in advance of date, sufficing for the longest whaling or cruising voyages.

Besides several hundred copies of the complete work supplied to the Navy, the Engineer Corps of the Army, the Coast Survey, geographical and exploring parties, astronomers, and various colleges and other public institutions, about five thousand copies of the abridged almanac for navigators have been supplied to American merchant ships during the past year.

#### VI.—SIGNAL OFFICE.

The instruction for the junior grades of naval officers in the various departments of the Army Signal Code has been prosecuted since the report of the Signal Office.

The Signal Office, Commander J. J. Almy, now in charge of that important department, is a part of the appendix to this report, and is gratifying as evidence of the efficiency for actual service. In time of action, or of emergency, a rapid and unmistakable understanding of what is required is essential in commanding a vessel is necessary to the efficient functioning of a vessel forming a squadron or fleet, and it seems to be a duty of the Signal Office to furnish this instruction.

#### VII.—NAVAL APPRENTICES.

There is a general misapprehension on the part of parents and others as to the number of naval apprentices, and become convinced that the system is proven ineffective.

The number of apprentices on board ship is necessarily confined to the number of the performance of their duties, including instruction afloat, and in getting the requisite education for warrant officers, a most useful and necessary class which few apprentices fit themselves for or ever reach.

*Summary of prevalent forms of disease on home and foreign service for the year ending December 31, 1870.*

	North Atlantic.	South Atlantic.	European.	Pacific.	Adantic.	Special service.	School and practice.	Court Survey.	
Aggregate number of men.....	1,731	875	2,627	1,694	2,278	1,331	176	45	12,7
Febriile diseases:									
Cases treated.....	327	124	169	195	198	204	5	1	1,2
Deaths.....	1		5	1		3			
Diseases of the digestive system:									
Cases treated.....	271	187	189	212	208	136	29	4	1,1
Deaths.....				3		1			
Diseases of the respiratory system:									
Cases treated.....	145	136	211	172	167	111	6	6	1,0
Deaths.....	3	2	2			4			
Diseases of the circulatory system:									
Cases treated.....	40	15	19	5	10	8	2		1,0
Deaths.....	1			1					
Diseases of the brain and nervous system:									
Cases treated.....	60	69	45	93	76	35	1	4	1,0
Deaths.....		2				1			
Diseases of cutaneous and cellular system—cases treated.	230	142	180	301	251	75	5	3	1,1
Diseases of fibrous, osseous, and muscular system—cases treated.	146	128	149	164	159	60	2	2	1,0
Diseases of serous and absorbent system—cases treated.	13	1	3	3	9	3			1,0
Diseases of genito-urinary system:									
Cases treated.....	102	75	108	225	241	77	1	3	1,0
Deaths.....			1						
Malignant diseases—cases treated	53	2	20	23	23	19			1,0
Diseases of the eye and ear—cases treated.	44	27	26	48	30	16	1		1,0
Wounds and injuries:									
Cases treated.....	323	239	300	335	300	147	11	2	1,0
Deaths.....	2	1	2	4		2			
Total cases treated.....	1,774	1,165	1,449	1,776	1,755	891	63	31	1,0
Total deaths.....	7	5	10	9	10	11			1,0

#### INSANE OF THE NAVY.

On the 30th of September, 1870, there remained under treatment in the Government asylum for the insane near this city, 3 officers, 6 seamen, 1 extra seaman, 4 landsmen, 1 coal-heaver, 2 late first-class boys, 6 marines, 2 beneficiaries, and 1 late seaman: total.....

During the year ending September 30, 1871, there were admitted, 3 officers, 1 apothecary, 1 seaman, 3 landsmen, 4 marines, and one beneficiary; total....

Total number under treatment during the year.....

The discharges in the course of the year were:

By recovery: 1 officer, 1 seaman, 2 landsmen..... 3  
 By improvement: 1 landsman..... 1  
 By death: 1 seaman, 1 marine..... 2

Leaving in the institution on the 30th of September, 1871: 5 officers, 5 seamen, 5 landsmen, 1 apothecary, 1 coal heaver, 1 extra seaman, 2 late first-class boys, 9 marines, 3 beneficiaries, and 1 late seaman; total.....

#### NAVAL HOSPITAL FUND.

The condition of this fund is represented as follows:

Balance on hand October 1, 1870..... \$267,622  
 Transferred to the fund by the Fourth Auditor in settlements of accounts,  
 &c., from October 1, 1870, to October 1, 1871..... 31,665



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The recommended initial point on the Atlantic coast for the proposed

kept on duty, because there is no refuge for them but the poor-house or the grave.

It gives me pleasure to report that valuable scientific papers, adding to that knowledge which is of general benefit, have been received and given to the public by the Bureau. First, through the instrumentality of Commodore C. R. P. Rodgers, then in Europe, a very valuable paper upon the British contagious-diseases act, of great hygienic, naval, and moral interest. Second, original professional and scientific papers from the following officers of the medical corps: Medical directors, Ruschenberger and McClelland; medical inspectors, Wilson and Maccoun; surgeons, Gihon, Gorgas, Bloodgood, and Taylor; and Passed Assistant Surgeon Pilcher, all of which testify to the efficiency and abilities of the members of the medical corps.

Very respectfully, your obedient servant,

W. M. WOOD,

*Surgeon General, U. S. N., and Chief of Bureau.*

Hon. GEORGE M. ROBESON,

*Secretary of the Navy.*

## BUREAU OF PROVISIONS AND CLOTHING.

### BUREAU OF PROVISIONS AND CLOTHING,

*November 1, 1871.*

SIR: I have the honor to submit herewith estimates marked A, B, C, D, and E, and schedules marked F, G, and H, and statement marked I, for the fiscal year ending June 30, 1873.

It is not deemed necessary to make an estimate for clothing for the Navy.

I deem it my duty to recommend that the ration of tea, coffee, and sugar, be increased one-third, viz, tea from one-fourth of an ounce to three-eighths of an ounce; coffee, from one-half of an ounce to three-fourths of an ounce, and sugar from two ounces to three ounces per day, for each person.

It is the practice on board vessels of the Navy to have the men called up at daylight in the morning, and not to have breakfast until 8 o'clock, and it is almost the universal custom, and considered highly necessary to health, for persons in malarious and tropical climates, in which our vessels mostly cruise, immediately on rising to take a cup of tea or coffee. This has been frequently recommended by the medical officers of the Navy, and in some cases the commanding officers have ordered, as a sanitary measure, the issue of an extra ration of coffee and sugar. This is, however, not warranted by law, and it is a responsibility that commanders of vessels should not be required to assume.

I also beg leave to renew my recommendation that the men be allowed an outfit of clothing on enlisting in the Navy.

I am, very respectfully, your obedient servant,

EDWARD T. DUNN,

*Paymaster General, United States Navy.*

Hon. GEO. M. ROBESON,

*Secretary of the Navy.*

## BUREAU OF STEAM ENGINEERING.

NAVY DEPARTMENT,  
*Bureau of Steam Engineering, October 30, 1871.*

SIR: In obedience to your order the 13th instant, I have the honor to submit the annual report of this Bureau, together with the estimates for maintaining the steam-machinery of vessels of the Navy afloat; for the preservation, repair, and refitting of others needed for service; for materials, and stores; and for the civil establishment in the Bureau and navy-yards.

The appropriations for this Bureau for the last four years have been so small and inadequate to its requirements as to render the completion of new machinery for vessels under construction impossible; or to repair that in vessels at the yards, that may at any time be required for service; or, indeed, to keep in a good state of preservation the machinery of the vessels laid up in ordinary.

An inspection of the following list will show the number and names of vessels having their machinery under repair, to be repaired, to have new machinery, and those in which as yet no machinery has been erected, viz:

## UNDER REPAIR.

*Steam steamers.*—Minnesota, (1st rate;) Hartford, (2d rate;) Worcester, (2d rate;) Lackawanna, (3d rate;) Tuscarora, (4th rate;) Frolic, (5th rate.)

## TO BE REPAIRED.

*Steam steamers.*—Franklin, (1st rate;) Richmond, (2d rate;) Lancaster, (2d rate;) Monongahela, (3d rate;) Plymouth, (3d rate;) Kearsarge, (4th rate;) Mohican, (4th rate;) Nantasket, (4th rate;) Kansas, (5th rate;) Nyack, (5th rate.)

*Paddle-wheel steamers.*—Gettysburgh, (5th rate.)

## TO HAVE MACHINERY.

*Steam steamers.*—Tennessee, (2d rate;) Omaha, (2d rate;) Dakotah, (4th rate;) Galena, (5th rate;) Quimichang, (5th rate.) The machinery of the Omaha is being erected on board that vessel.

## ON THE STOCKS.

*Steam steamers.*—Connecticut, (1st rate;) Antietam, (1st rate;) Illinois, (1st rate;) Java, (1st rate;) New York, (1st rate;) Pennsylvania, (1st rate.)

*Iron-clads.*—Colossus, (2d rate;) Massachusetts, (2d rate;) Nebraska, (2d rate;) Oregon, (2d rate.)

Since my last annual report the repairs, alterations, &c., to the machinery of the following-named vessels have been completed, viz:

*1st rates.*—Wabash, California.

*2d rates.*—Pensacola, Powhatan.

*3d rates.*—Canandaigua, Ticonderoga.

*4th rates.*—Iroquois, Wachusett, Wyoming.

*5th rate.*—Shawmut.

*Iron-clad.*—Miantonomah.

An appropriation having been made at the last session of Congress for the equipment of the foundry at the Mare Island navy-yard, the necessary appliances not made at the yard have been forwarded, and the work of fitting up is being pushed to completion. An appropriation having also been made for the completion of the works of the new machine-shop, Brooklyn navy-yard, the machinery in the old building is under process of removal to the new building, and being erected, and the old building will be converted into an engineers' store-house.

The Department, believing the time to be near at hand when Congress must hear the repeated appeals from citizens and officials to repair losses from decay and reduction of vessels, and strengthen the Navy by additions of an improved class of ships, so as to bring up the standard, in some degree at least, commensurate with the navies of the more important European nations; and desiring, in new constructions, to take advantage of all improvements that science and art can suggest; and the subject having been brought to your notice that radical and important changes had occurred in marine engineering abroad since our latest ships were designed and constructed, you wisely determined that this Bureau should be placed in possession of the facts in relation thereto.

Accordingly, I was directed to proceed to Europe, communicate with our ministers and agents in all countries deemed necessary to visit, for the purpose of gaining admission into the public dock-yards and other establishments; to make the proper investigations and obtain reliable information in relation to the several varieties of engines, boilers, &c., used in naval and commercial vessels, and to decide on the type regarded as the most successful and the most economical in consumption of fuel that may be advantageously applied to vessels of war. Also, to make observations on dock-yard machinery and appliances, and any other information considered of value to the Department.

Fortified with full authority under the orders thus issued, I sailed from New York June 10, for England, and returned here October 9, 1871, the time intervening in Europe being constantly occupied in visiting the largest and most important engineering works, dock-yards, and vessels, examining plans, observing constructions, in design and detail, as well as the plants, or facilities and appliances, for rapid and economical execution of work; also the material used in construction. That no time was lost, unnecessarily, in discharging the duties assigned, will be apparent from the fact that the following-named extensive establishments, in different localities of Great Britain, France, Germany, and Belgium, were visited, and some of them several times; besides, visits were made to many iron-clads and commercial vessels building, completed, and in service, as well as to distinguished engineers and other persons not connected with engineering works, but necessary to be seen.

The establishments visited were as follows: Her Britannic Majesty's royal dock-yard, Devonport and Keyham, on the southwest coast; the dock-yard, Chatham, on the river Medway; the several engineering works of Mr. John Penn & Son, Messrs. Mauldslay, Fields & Co., Messrs. Humphreys & Tenant, Messrs. J. & G. Rennie, Messrs. Ravenhill & Hodson, Messrs. Dudgeon, "The Canal Iron-Works," and the "Thames Engineering Works and Iron-Ship Building-Yard," all on or near the river Thames; the several engineering works and iron-ship building-yards of Messrs. Palmer & Co., Messrs. Michael & Co., Messrs. Leslie & Co., and the engine-works of Messrs. Stephenson & Co., all on the river Tyne; the several engineering works and iron-ship building-yards of Messrs. John Elder & Co., Messrs. Napier & Son, Messrs. J. & G. Thompson, Messrs. Denni Brothers, and the Dennistown forge, all on the river Clyde; the engineering works and iron-ship building-yard of Messrs. Laird Brothers, the Vauxhall Engine Works, and the Mersey Steel and Iron Works, all on the river Mersey; the Bolton Steel-Works, and Hicks Engine Factory, both at Bolton; the machine and tool works of Messrs. Greenwood & Batley, at Leeds; the Atlas Works, at Manchester—all of the above being in Great Britain. In France: The National (late Imperial) Toulon Dock-Yard, on the Mediterranean; the *Société Nouvelle Forges, Chantier le Soyne*; the very extensive engineering

works of M. Schneider & Co., at Le Creusot; and the engineering works of J. Mazeline, at Havre. In Germany: The engine factory and iron-works building-yard of the Bayenthal Company, on the river Rhine; the great and noted steel-works of Mr. Fred. Krupp, at Essen. In Belgium: the iron and steel manufacturing works and engine factory of the Cockerell Company, at Seraing, on the river Meuse.

This list contains the names of the most extensive and important establishments in Europe, from which the best types and build of ships have been put afloat, and the most improved machinery constructed. Not only of the number, viz, Messrs. Schneider & Co., the Palmer Company, and the Cockerell Company, are distinguished as manufacturers of the metals as well as construction and engineering.

From the ore and coal entering the gates or mined on the spot, the metal, bar and plates, also steel, are manufactured, and from these materials machinery and ships of every class are produced; a combination peculiar to these great yards, and not to be found elsewhere.

My report of an examination of the docks-yards and iron-works of Great Britain and France, communicated to Congress by the honorable Secretary of the Navy, December 22, 1864, contains brief and correct descriptions of the principal establishments at that date, and it is not deemed necessary to go into a further description of any of them at this time.

The tour proved very instructive and interesting in many respects, especially in Great Britain, where immense fleets of iron ships are constructed and put afloat yearly; where ships are built for nearly all European nations; and where the British navy is systematically improved and strengthened by additions of nearly twenty thousand tons of iron clads annually, besides transports and auxiliary vessels.

The vast and varied experience of their constructing engineers, and the sharp competition between rival building-firms, have given rise to great improvements and compelled the adoption of many designs, which a few years ago regarded as the best types of engineering skill.

The pressure of steam carried in marine boilers has gradually risen, the corresponding increase in the extent to which engines are carried, the boilers have been increased and are coming into general use on board ships, in which the steam is kept from 60 to 75 pounds per square inch, and expanded in the cylinders from 10 to 14 times.

The form of boiler used for generating the steam differs from the simple so long employed in all European steamers. It is built with a cylindrical shell of from 9 to 16 feet diameter, and of 1/2 inches thickness, in the quarters to one-quarter of an inch according to the pressure to be carried. It is sometimes from 9 to 16 feet long and is placed in the vessel athwartships, with fire-rooms at the ends and in the center by way of access. Sometimes about 15 feet long, placed fore and aft and transverse at the end. There are two or three cylindrical tubes, 12 to 18 inches in diameter which are the grates, and above them a set of horizontal tubes through which the gases return to the front, there being a small back boiler is strong, of moderate cost, and generates steam rapidly and economically.

The type of engine employed for working the steam is of the simple expansion, or compound; the steam being first expanded from its first into a small high-pressure cylinder, then expanded into a second or fourth of its original pressure, then passed into a third cylinder of a large or low-pressure cylinder, where, after being expanded to the end of the stroke, it is exhausted into the condenser. This compound working steam expansively was introduced by Woolf in 1781, and

ago, but at that date steam was used at a very low pressure, and the project met with no success. For many succeeding years the subject was discussed and experimented with by engineers, but no advantages over the ordinary method of working steam expansively in a single cylinder were reached, until a talented engineer of Scotland, Mr. John Elder, proprietor of the Fairfield Works, near Glasgow, several years ago took up the subject, and in the face of immense opposition zealously pursued it, designing and constructing every year several sets, each being more and more improved in design and detail, until brought to the present state of perfection.

Of the thirty-seven engineering-works and iron-ship building yards on the Clyde, the Fairfield Works is now the most extensive and important. At the time of my visit, this firm had already completed one hundred and thirty pairs of marine compound engines, and accompanying boilers, and had then twenty-two pairs under construction—all for ocean steamers; besides, in their ship-yard, ten large iron vessels were on the blocks, four at the wharf being engined and completed, and orders were on hand for others as soon as room could be made for them. This firm is justly regarded as the pioneer of the compound system, and their productions accepted as the best types.

The largest establishment on the river Tyne, "and as a combination of engineering and manufacturing" the most extensive in Great Britain, the Palmer Company, had under construction about the same number of compound engines; two iron-clads for the British navy, and several other vessels. In short, all engineering works in Great Britain are now building their marine steam-machinery on the new system. These engines are also manufactured by Monsieur Schneider & Co. at Le Creusot, and M. Mazeline, at Havre, France. They are also built in Germany, and in Belgium. Indeed, the success of the system is so certainly established that no European owner will now contract for an ocean steamer unless it is stipulated that she shall be propelled by compound machinery.

Many commercial vessels containing very good machinery of the ordinary kind have been laid up, the machinery removed, and other machinery, on the new system, substituted. An example of this came under my notice in the case of one of the West India mail screw steamers—the *Tesmania*. This vessel, twelve years old, had the best machinery, with jet-condenser, at the date of construction; with fifty round trips had been made. All the machinery was then removed and compound machinery substituted. At the date of my visit, one round trip had been made with it, and an inspection of the logs showed the average consumption of coal for the round trip, with the old machinery, to be 3,000 tons, while the round trip with new machinery had been made with 1,445 tons; speed of vessel remaining the same. In some cases, such as that of the *Ville de Paris*, and *Periene*, of the French Atlantic line, both comparatively new ships and having excellent machinery, orders have been issued for its conversion by the addition of a third steam-cylinder, to be used for the admission of the high pressure steam, the removal of the present boilers, and in lieu thereof high-pressure ones placed on board.

The Cunard Company, the most conservative of all steamship companies, who were the last of the companies to substitute iron vessels for wooden vessels, who were the last to give up the paddle-wheels for the screw, are now the last to accept the compound engine and high-pressure steam in the vessels of their line in lieu of the old system. But in this, as in former cases, sharp competition of several lines has caused

the object was to convert the machinery of one of their vessels, and to plan the new type of two small vessels, the *Batavia* and *Parthya*; and, as the time of my visit, the models were being prepared for two types of engines, one for the compound type, and the other to be constructed and run on the simple type of machinery.

11. The Commission, charged with the administration of by far the largest body of potentiality in the world, always more careful in the application of new inventions, rarely adopting any untried plans, but still employing the most successful in practical operation, have in this particular made the test of the new system by its application to two of their wooden vessels, the *Fenelos* and the *Bition*, of 1261 and 1261 tons register, respectively. The success attending the trials of these two vessels, notwithstanding the third sister for the *Thetis*; also two other vessels of the same series, *Ionolis*, *Ryona*, and *Cyclops*, all now under construction, and although several monohulls and manned vessels, are now completed with the ordinary type of screw machinery, ordered for some many years ago, all future ships constructed for the Russian navy will doubtless be engaged on the new system. It is not probable, however, that any of these six hundred registered vessels will be ordered to undergo the process of automation, because their cruising stations are intended to be essentially sailing vessels, and their steam-power is only used when the sails cannot be depended upon to accomplish the purpose required; the rest, therefore, of the automation from the old to the new, would be brought about by the results desired to be obtained.

The original cost of steam machinery on the compound system, its total weight and the space occupied by it in a vessel, does not materially differ from that of the ordinary type. The advantages are solely in the reduced consumption of fuel, less space for it on board, and smaller amount of men required to handle it. These advantages have been fully demonstrated on commercial vessels making long passages, so great that the new type of machinery is steadily replacing the old on the one hand, the same displaced tonnage and volume of steam condensation discharge, the need of condense. In the two instances of the Royal British, it is noted that the compound engine has been applied and tested on the Atlantic steamer, plying between New York and Liverpool, and that the compound system of machinery developed is claimed to be twenty per cent. more economical in the use of coal per horse power per hour than the best of the same power developed under the ordinary compound system of steam condensation. In other words, a steamer propelled by the new compound and at the same speed by compound machinery would require only one fourth of the coal that required one third of the ordinary compound machinery to carry twenty per cent more steam, or to propel at the same rate of travel, a half-ton and a half ton less.

The steamer, which is the largest of its kind in the world, may be fully not only the largest sailing ship, but the middle-wheel steamer. Captain of the Central Republic, Port-au-Prince, said that it was regarded as the best built and strongest sailing ship in the world, having a mainmast section of 844,000 lbs., a foremast of 400,000 lbs., and a mainmast of 1,000 tons on the mainmast, plus 100,000 lbs. of 100,000 lbs. of 100,000 lbs. The City of Haiti, a schooner, was built in 1869 and has a mainmast of 100,000 lbs. and a foremast of 25 tons per day, or 100,000 lbs. of 100,000 lbs. The Spanish screw steamer of the Central Republic, built in 1871, was 100,000 lbs. and the largest of its kind, the Athenian, was a length of 125 feet 6 inches on the mainmast, being loaded 11 feet, draught, loaded, 21 feet 9 inches, made the

passage in September with 53 tons of coal per day, or 530 tons for ten days' run; all three vessels having the same average speed; and the percentage only of the gain being due to the finer lines and proportion of the last-constructed vessels.

The field of observations in this direction has been thoroughly over, the subject carefully investigated, and the Bureau is informed to the extent of European operations and results, of which a brief outline has been given. The information is positive, and there can be no hesitation in recommending that all cruising steamers for the Navy hereafter afloat be engined on the compound system, and that all the machinery stored in the navy-yards that cannot be used to advantage in the old vessels, or converted into compound, be disposed of by sale, or broken up and used as old material; and in view of the necessity of timely preparation the Bureau has taken steps for the execution of complete sets of working drawings for machinery of vessels of the stocks, and that will suit classes of vessels that may be designed as cruisers. It is not however recommended to remove the machinery from any of the old vessels for the purpose of replacing it by the new, except in cases where the repairs to the old shall be found so costly as to condemn it altogether; for the appropriations are desired to be as small as compatible with the public interest, and the cost of alteration would be too great, considering the advantages desired to be gained under the regulations, to use sails as the motive-power except in cases of emergencies.

The fleets of European commercial vessels afloat and building are composed exclusively of iron screw-steamers. The advantages of iron over wood as a material for ship construction consists in the fine lines that can be obtained in iron without impairing the strength of the structure, the less weight of hull, and by far greater strength than can possibly be obtained in wood; greater safety from the admission of transverse shocks, heads, durability and freedom from deterioration for an indefinite period when preserved by paint, consequently no cost for repairs to hull besides rigidity of the vessel and the solid foundation on which the engines can be secured, thus preventing the perpetual difficulty of the machinery being put out of line by change of hull-shape, and the cost thereof that occurs in all our long wooden vessels. The entire force of the royal navy of Great Britain is composed almost exclusively of iron steamers. Wooden vessels are not now built, for all the reasons that apply in case of commercial vessels, and for the additional reason that such weight of armor as has become necessary in iron-clad vessels prove destructive to a wooden hull, even were the wooden hull capable of sustaining the strain for a length of time of the increased power required for speeds of from twelve to sixteen knots per hour. Again, in large iron vessels, constructed with cellular bottoms, the less liability to general breaking up when run ashore on rocks has recently been fully proved in case of the British iron-clad *Agincourt*, of 6,638 tons. This vessel was run ashore on Pearl Rock, near Gibraltar, in July last, remained there several days, and was soon after detached to Devonport, where I had the privilege of inspecting her double bottom, and found the damage to consist of bulged and cracked plates of the skin amidships, no injury having occurred to the inner bottom worth noting. It is fully believed that if the structure had been of wood instead of iron a wreck would have been the result. The disadvantages of rapid fouling of the bottom of iron vessels in warm climates is still a serious evil, and as yet is only entirely prevented by a weekly planking, hermetically covering the iron skin below the water line.



sheathed with white metal, as has been done on the iron-clads *Swiftsure*, *Triumph*, and *Audacious*, the unarmored *Raleigh*, *Blonde*, and other British naval vessels.

The advantages of this established system must eventually result in commanding a body of educated and skillful engineers. The subject is of considerable importance to our Navy—far greater than is generally believed. Our supply of candidates has heretofore been received from among the young men of marine-engine factories and ocean steamers, many of whom entered such establishments and ships especially for the purpose of graduating for the Navy, and when passed by the examining board were admitted into the Navy as third assistant engineers. In this grade they were schooled on board ship for the duties of the next highest grade, and again examined in each grade until the highest was reached.

Now, material changes have taken place; our commercial ocean steamers are in very limited numbers, and the marine-engine factories of the country are reduced to a very few; besides, the grade of third assistant engineer has been abolished, so that unless the subject of Government education for naval engineers be carried fully into practical operation under existing laws, or other systems adopted, the future will find this branch of our Navy hopelessly behind all important navies of the world, a result which liberal-minded officers and citizens having the interests of the Navy at heart would seriously regret.

The usual yearly contracts for supplies for the engineer departments of the different navy-yards were not made during the present fiscal year. The expenditure has been restricted wherever it was possible, and, with exceptional necessary purchases, the surplus at some yards has been shipped to others where it was needed. But these supplies, remaining from previous years, are nearly exhausted, and, as it is necessary always to retain a stock of stores and materials on hand, it is proposed to make purchases during the next fiscal year.

The estimates for the year will be found in the accompanying papers, marked A and B.

Very respectfully, your obedient servant,

J. W. KING,

*Chief of Bureau.*

HON. GEO. M. ROBESON,

*Secretary of the Navy.*

## BUREAU OF CONSTRUCTION AND REPAIR.

### NAVY DEPARTMENT.

#### BUREAU OF CONSTRUCTION AND REPAIR.

*October 26, 1871.*

SIR: In compliance with your instructions, I have the honor to submit the following estimates for the fiscal year ending the 30th June, 1873, so far as coming under the cognizance of the Bureau of Construction and Repair.

The paper marked A includes the estimates for the expenses of this Bureau, authorized by act of Congress.

The tabular estimates on paper marked B is the usual annual cost of the civil establishment at each navy-yard, embracing a recommendation for increase of pay in some instances, and a reduction in others, of the

civil officers, with a view of equalizing the pay of employes in this Bureau with the pay of similar persons in other Bureaus at the same yards.

The paper marked C exhibits the estimate for the maintenance and preservation of the vessels in the Navy, embracing those afloat, at sea, and on the stocks; the cost of labor at the different navy-yards and on foreign stations; the purchase of materials, tools, machinery, and appliances.

These estimates are made for the current expenses of maintaining the Navy in its present condition, and with the limited number of seamen allowed by law.

Of the twelve first-rates, five are built of white-oak frames, and are now on the stocks incompleated and somewhat decayed. It will be necessary to complete and launch those that are in the best state of preservation very soon, or the cost of replacing the rotten wood with sound material will be very expensive.

The *Guerriere* has been so much damaged by accident and decay that she may be considered not worth repairing. The *Illinois*, now on the stocks at the Kittery yard, is not considered worth completing, and should be broken up. The *California*, flag-ship in the Pacific, will not, at the expiration of her present cruise, be worth the cost of the repairs required.

In the second-rates, the *Albany* may be considered condemned. The *Iowa* is very much decayed, and it will not be proper to repair her, unless the services of a vessel of her extraordinary speed shall be wanted. The *Congress*, *Severn*, flag-ship of the North Atlantic fleet, and *Worcester*, will not be worth the extensive and expensive repairs required at the expiration of their present cruises.

Those of the third-rates, twelve in number, have nearly all been repaired, and are efficient vessels.

Of the eleven vessels of the fourth rate, the *Dacotah*, *Kearsarge*, and *Tuscarora* require expensive repairs, but having live-oak frames, and being, when in order, efficient vessels, their repairs have been commenced. The *Nantasket*, *Resaca*, and *Swatara* have white-oak frames, of unseasoned timber when built, and will not be worth costly repairs.

There are nineteen vessels of the fifth rate, of which six are sailing-ships, two captured blockade-runners, valuable for special service, some built of white-oak timber, very much decayed and requiring thorough repairs, and the remainder are in service. Of the receiving and practice ships, a number have been condemned, some are in commission as practice-ships, store-ships, and dispatch-vessels. These vessels can only be called auxiliaries to the Navy, which could be supplied from the merchant marine, or built at short notice when required, and should not be considered as composing any part of the strength of the Navy.

#### IRON-CLADS.

In reporting the condition of the iron-clad vessels, very little can be said in their favor. Forty of the fifty-one vessels are of less than 500 tons measurement; cannot carry a modern battery; have very little speed, consequently cannot be of much use in fighting an enemy in an offing or in protecting a harbor. They were built in violation of established principles of naval architecture; have been of no practical service to the country, unless their name of *iron-clad* has spread terror through the world. The deck-beams of most all of the small class are very much

decayed, but it is not advisable to replace the rotten beams with iron, except something unforeseen calls for their services. Four of the largest ships, built in the navy-yards of white oak, are now on the stocks, two of which are too much decayed to be completed, and should be broken up. One, the Colossus, I respectfully recommend be completed and launched as a type of the class.

It is not considered good policy for this Government to build large iron-clad vessels at the present time, inasmuch as endurance may be obtained in vessels carrying few guns of heavy armor, and it will be well to await the experience of those governments who are obliged to spend money in the investigation of whether vessels shall be iron-clad or not; the improvements in ordnance tending to raise that question.

As the tugs are appendages to naval stations and yards, they should not be considered naval vessels, nor be enumerated as forming any part of the efficient vessels in the Navy.

It will be seen by the report of the condition of the vessels composing the Navy as above, that a large number of them are very much decayed, owing, in a measure, to the use of unseasoned timber. Vessels costing over \$1,000,000 have only made one cruise, and then have been found to be too much decayed to be repaired. This alarming decay of vessels has caused the investigation of the preserving materials used for making wood durable, and has led to the conviction that wood impregnated with carbolic acid will increase its durability many years, and an apparatus in connection with steaming and bending process is being erected in the Boston yard, from which it is believed that a great amount of the large expenditure for repairs will be saved.

#### NEW VESSELS.

In view of the diminution in the number of the vessels most useful, I respectfully recommend that one vessel of the third rate, carrying 12 guns of large caliber, be built at each of the important navy-yards, some to be built of iron and others of wood. The importance of building these vessels cannot be too strongly urged upon the attention of Congress. Besides being the most economical vessels to keep in commission, they would be safe, handy, and comfortable cruisers, carrying an effective battery; and with all of the modern improvements introduced, they would command respect to the flag, and afford protection to our interests, commerce, and countrymen abroad, and carry with them the impression that this Government could produce a formidable navy in an emergency.

The work of building these vessels would tend to keep in practice our shipwrights and mechanics; would educate our mechanics in iron ship-building; would be the means of furnishing our yards with tools and machinery for that particular kind of work, and afford an opportunity for young men and boys to learn the art and science of naval construction.

In this connection, I beg to say that, in affording an opportunity for boys to learn the trade of shipwright, a school would be opened for the practical introductory course of education, of great importance to those showing an aptness for learning the science of naval construction. And it seems that the Government must look to this point in providing the country with competent naval constructors, who can only be qualified through a practical and theoretical education. This may be commenced by employing a large number of boys as apprentices, and after two years' work in the yards, selecting a number of those showing the

greatest aptness for the profession, and entering them at the Naval Academy as cadet shipwrights, where they would receive the necessary education for their profession, and then send them back to the navy-yards to finish their trade, when they would be employed as leaders of gangs, quartermen, foremen, and so on, to naval constructors, as they merited promotion. Now that our merchant ship-yards have been, through the decline of the merchant marine, closed, this seems to be the only resource for this important education, and, consequently, of great importance.

As the time and cost occupied in building and repairing vessels in the Navy depend upon the ready supply of materials, the facilities in shops, tools, machinery, and appliances, in the different navy-yards and the means for receiving and transporting the materials to the different places where work is being done, it is necessary that each yard should be well provided with these improvements, and especially with rail-tracks and portable steam-engines, by which there is so great a saving of time and expense.

Accompanying this report is a list of vessels repaired during the year past.

I am, sir, very respectfully, your obedient servant,

I. HANSCOM,

*Chief of Bureau.*

Hon. GEORGE M. ROBESON,

*Secretary of the Navy.*

## MARINE CORPS.

### HEADQUARTERS MARINE CORPS,

*Washington, October 21, 1871.*

SIR: I have the honor to report to the Department that at the usual annual inspection of the several marine stations I found the troops in most excellent order, and exhibiting a state of discipline and efficiency very creditable to the respective commanding officers.

The personal appearance, equipment, and drill of the men were, in my judgment, all that could be desired, and I received assurances from the officers in command that the various duties intrusted to them during the year had been very satisfactorily performed.

The barracks and other public property at the stations I also found in their usual good condition and well cared for. Some alterations and repairs would be advantageous at some of the stations, but the matter is not so urgent as to require attention at the present time.

I have heretofore, on several occasions, referred to the want of a proper barracks at the Norfolk station, and its importance is such that I again ask the attention of the Department to the subject, with the hope that Congress may be induced to authorize the erection of suitable buildings for the purpose.

There will be on hand at the close of the present fiscal year a large surplus on account of "pay of the Marine Corps," resulting from the recent reduction in the pay of enlisted men. This balance would probably be sufficient to build a good and substantial barracks, and would only require the sanction of Congress to make a transfer of the amount for the purpose, and thus no expenditure would be made beyond the appropriations for the current year.

It seems to be the intention of the Department to keep a permanent force of marines at the Naval Academy at Annapolis, it will also be necessary, ere long, to make suitable provision to properly quarter the same. The small buildings on the wharf now occupied by them are very inconvenient as a temporary arrangement, but they seem to me to be much in the way of general naval operations, and I have no doubt it will be found necessary to remove them in carrying out the improvements contemplated at that station.

The general return of the Corps, transmitted to the Department a few days since, shows the present disposition of officers and men, about one-third the number being on ship-board and the remainder distributed at several shore stations.

I regret to report that we are at present about 340 men short of our full complement, notwithstanding every effort has been made to keep the Corps full. But few recruits are now offering for enlistment, and I can only say that during the past summer we lost an unusually large number of men by desertion.

This was owing in some measure, perhaps, to the general demand for mechanics and laborers throughout the country, but the chief cause is the reduction of pay which took place in pursuance of law, on the 1st of July last.

The men were, of course, aware of the precarious tenure of the law under which they received their pay, as they are distinctly informed at enlistment that it is subject to be reduced by Congress at any time; yet when the reduction took place, which had been anticipated for years, it caused considerable dissatisfaction among a large portion of the men, who would regard the matter in no other light than an act of injustice to them on the part of the Government.

The reduction is indeed a very sensible one to them, and it is to be regretted, inasmuch as it will have a tendency to cause the most worthy and efficient non-commissioned officers and men to seek other employment as fast as their terms of service expire; indeed, many have already sought the aid of friends to be specially released from their engagements. Yet the reduction affects alike their brethren of the Army, and they have no reasonable cause for complaint.

The estimates submitted by the quartermaster and paymaster of the Corps are based upon the number of men authorized by the Department for the year, and the sums asked for under each head of appropriation have been reduced to the lowest possible amounts necessary for the support of the Corps.

I am, very respectfully, your obedient servant,

J. ZEILIN,  
*Brigadier General and Commandant.*

W. GEO. M. ROBESON,  
*Secretary of the Navy.*

## EXPEDITION TOWARD THE NORTH POLE.

*Instructions to Captain C. F. Hall, commander of the expedition.*

NAVY DEPARTMENT, June 9, 1871.

SIR: Having been appointed, by the President of the United States, commander of the expedition toward the north pole, and the steamer

Polaris having been fitted, equipped, provisioned, and assigned to that purpose, you are placed in command of the said vessel, her officers and crew, for the purposes of the said expedition. Having taken command, you will proceed in the vessel, at the earliest possible date, from the navy-yard in this city to New York. From New York you will proceed to the first favorable port you are able to make on the west coast of Greenland, stopping, if you deem it desirable, at St. John, New Greenland. From the first port made by you on the west coast of Greenland, if farther south than Holsteinborg, you will proceed to that port; thence to Godhavn; (or Lively,) in the island of Disco. At some one of the ports above referred to you will probably meet a transport sent by the Department, with additional coal and stores, from which you will supply yourself to the fullest carrying capacity of the Polaris. Should you fall in with the transport before making either of the ports above said, or should you obtain information of her being at, or having landed her stores at, any port south of the island of Disco, you will at once proceed to put yourself in communication with the commander of the transport, and supply yourself with the additional stores and coal, taking such measures as may be most expedient and convenient for that purpose. Should you not hear of the transport before reaching Holsteinborg, you will remain at that port, waiting for her and your supplies as long as the object of your expedition will permit you to delay for that purpose. After waiting as long as is safe, under all the circumstances as they may present themselves, you will, if you do not hear of the transport, proceed to Disco, as above provided. At Disco, if you hear nothing of the transport, you will, after waiting as long as you deem it safe, supply yourself, as far as you may be able, with such supplies and articles as you may need, and proceed on your expedition without further delay. From Disco you will proceed to Upernavik. At these two last-named places you will procure dogs and other Arctic outfits. If you think it of advantage for the purpose of obtaining dogs, &c., to stop at Tossak, you will do so. From Upernavik, or Tossak, as the case may be, you will proceed across Melville Bay to Cape Dudley Digges, and thence you will make all possible progress, with vessels, boats, and sledges, toward the North Pole, using your own judgment as to the route or routes to be pursued and the locality for each winter's quarters. Having been provisioned and equipped for two and a half years, you will pursue your explorations for that period; but, should the object of the expedition require it, you will continue your explorations to such a further length of time as your supplies may be safely extended. Should, however, the main object of the expedition, viz, attaining the position of the north pole, be accomplished at an earlier period, you will return to the United States with all convenient dispatch.

There being attached to the expedition a scientific department, the operations are prescribed in accordance with the advice of the National Academy of Sciences, as required by the law. Agreeably to this advice the charge and direction of the scientific operations will be intrusted under your command, to Dr. Emil Bessels; and you will render Dr. Bessels and his assistants all such facilities and aids as may be in your power, to carry into effect the said further advice, as given in the instructions herewith furnished in a communication from the president of the National Academy of Sciences. It is, however, important that the objects of natural history, ethnology, &c., &c., which may be collected by any person attached to the expedition, shall be delivered to the chief of the scientific department, to be cared for by him, under your direction, and considered the property of the Government; and every person

be strictly prohibited from keeping any such object. You will direct every qualified person in the expedition to keep a private journal of the progress of the expedition, and enter on it events, observations, and remarks, of any nature whatsoever. These journals shall be considered confidential, and read by no person other than the writer. Of these journals no copy shall be made. Upon the return of the expedition you will demand of each of the writers his journal, which it is hereby ordered he shall deliver to you. Each writer is to be assured that when the records of the expedition are published he shall receive a copy; the private journals to be returned to the writer, or not, at the option of the Government; but each writer, in the published records, shall receive credit for such part or parts of his journal as may be used in said records. You will use every opportunity to determine the position of all capes, headlands, islands, &c., the lines of coasts, take soundings, observe tides and currents, and make all such surveys as may advance our knowledge of the geography of the Arctic regions.

You will give special written directions to the sailing and ice master of the expedition, Mr. S. O. Buddington, and to the chief of the scientific department, Dr. E. Bessels, that in case of your death or disability—a contingency we sincerely trust may not arise—they shall consult as to the propriety and manner of carrying into further effect the foregoing instructions, which I here urge must, if possible, be done. The results of their consultations, and the reasons therefor, must be put in writing, and kept as part of the records of the expedition. In any event, however, Mr. Buddington shall, in case of your death or disability, continue as the sailing and ice master, and control and direct the movements of the vessel; and Dr. Bessels shall, in such case, continue as chief of the scientific department, directing all sledge journeys and scientific operations. In the possible contingency of their non-agreement as to the course to be pursued, then Mr. Buddington shall assume sole charge and command, and return with the expedition to the United States with all possible dispatch.

You will transmit to this Department, as often as opportunity offers, reports of your progress and results of your search, detailing the route of your proposed advance. At the most prominent points of your progress you will erect conspicuous skeleton stone monuments, depositing near each, in accordance with the confidential instructions agreed upon, a condensed record of your progress, with a description of the route upon which you propose to advance, making codes of provisions, &c., if you deem fit.

In the event of the necessity for finally abandoning your vessel, you will at once endeavor to reach localities frequented by whaling or other ships, making every exertion to send to the United States information of your position and situation, and, as soon as possible, to return with your party, preserving, as far as may be, the records of and all possible objects and specimens collected in the expedition.

All persons attached to the expedition are under your command, and shall, under every circumstance and condition, be subject to the rules, regulations, and laws governing the discipline of the Navy, to be modified, but not overruled, by you as the circumstances may require in your judgment require.

To keep the Government as well informed as possible of your progress, you will, after passing Cape Dudley Digges, throw overboard daily, as open water or drifting ice may permit, a bottle or small copper cylinder, closely sealed, containing a paper, stating date, position, and such other facts as you may deem interesting. For this purpose you will have pre-

pared papers containing a request, printed in several languages, that the finder transmit it by the most direct route to the Secretary of the Navy, Washington, United States of America.

Upon the return of the expedition to the United States, you will transmit your own and all other records to the Department. You will direct Dr. Bessels to transmit all the scientific records and collections to the Smithsonian Institution, Washington.

The history of the expedition will be prepared by yourself, from the journals and records of the expedition, under the supervision of the Department. All the records of the scientific results of the expedition will be prepared, supervised, and edited by Dr. Bessels, under the direction and authority of the president of the National Academy of Sciences.

Wishing for you and your brave comrades health, happiness, and success in your daring enterprise, and commending you and them to the protecting care of the God who rules the universe,

I am, very respectfully, yours,

GEO. M. ROBESON,

*Secretary of the Navy.*

CHAS. F. HALL,

*Commanding Expedition toward the North Pole.*

#### APPENDIX.

*Letter of Professor Joseph Henry, (president of the National Academy of Sciences,) with instructions for the scientific operations of the expedition.*

WASHINGTON, D. C., June 9, 1871.

SIR: In accordance with the law of Congress authorizing the expedition for explorations within the arctic circle, the scientific operations are to be prescribed by the National Academy; and in behalf of the society I respectfully submit the following remarks and suggestions:

The appropriation for this expedition was granted by Congress principally on account of the representations of Captain Hall and his friends as to the possibility of improving our knowledge of the geography of the regions beyond the eightieth degree of north latitude, and more especially of reaching the pole. Probably on this account and that of the experience which Captain Hall had acquired by seven years' residence in the arctic regions, he was appointed by the President as commander of the expedition.

In order that Captain Hall might have full opportunity to arrange his plans, and that no impediments should be put in the way of the execution, it was proper that he should have the organization of the expedition and the selection of his assistants. These privileges having been granted him, Captain Hall early appointed as the sailing-master of the expedition his friend and former fellow-voyager in the arctic zone, Captain Buddington, who has spent twenty-five years amid polar ice; and for the subordinate positions, persons selected especially for their experience of life in the same regions.

It is evident from the foregoing statement that the expedition, except in its relations to geographical discovery, is not of a scientific character, and to connect with it a full corps of scientific observers, whose duty it should be to make minute investigations relative to the physics of the globe, and to afford them such facilities with regard to time and position as would be necessary to the full success of the object of their



Table 1. Comparison of the values calculated by the model with the experimental values of  $\alpha$  and  $\beta$  for the different populations.

[illegible][illegible][illegible]

As a result, the authors conclude that the use of the *in vitro* model is not appropriate for the study of the effects of the chemical on the *in vivo* system. The authors also suggest that the use of the *in vitro* model is not appropriate for the study of the effects of the chemical on the *in vivo* system.

the fact that the system is not designed to be used in a way that would allow a user to bypass the system's security controls. The system is designed to be used in a way that would allow a user to bypass the system's security controls. The system is designed to be used in a way that would allow a user to bypass the system's security controls.

vate use, or collections to be made other than those belonging to the expedition, is too obvious to need special suggestion.

In fitting out the expedition, the Smithsonian Institution has afforded all the facilities in its power in procuring the necessary apparatus, and in furnishing the outfit for making collections in the various departments of natural history. The Coast Survey, under the direction of Professor Peirce, has contributed astronomical and magnetical instruments. The Hydrographic Office, under Captain Wyman, has furnished a transit instrument, sextants, chronometers, charts, books, &c. The Signal Corps, under General Myer, has supplied anemometers, thermometers, aneroid and mercurial barometers, besides detailing a sergeant to assist in the meteorological observations. The members of the committee of the academy, especially Professors Baird and Hilgard, have, in discussing with Dr. Bessels the several points of scientific investigation, and in assisting to train his observers, rendered important service.

The liberal manner in which the Navy Department, under your direction, has provided a vessel and especially fitted it out for the purpose with a bountiful supply of provisions, fuel, and all other requisites to the success of the expedition, as well as the health and comfort of its members, will, we doubt not, meet the approbation of Congress, and be highly appreciated by all persons interested in arctic explorations.

From the foregoing statement it must be evident that the provisions for exploration and scientific research in this case are as ample as those which have ever been made for any other arctic expedition, and should the results not be commensurate with the anticipations in regard to them, the fact cannot be attributed to a want of interest in the enterprise or to inadequacy of the means which have been afforded.

We have, however, full confidence, not only in the ability of Captain Hall and his naval associates, to make important additions to the knowledge of the geography of the polar region, but also in his interest in science and his determination to do all in his power to assist and facilitate the scientific operations.

Appended to this letter is the series of instructions prepared by the committee of the academy, viz: the instructions on astronomy, by Professor Newcomb; on magnetism, tides, &c., by Professor J. E. Hilgard; on meteorology, by Professor Henry; on natural history, by Professor S. F. Baird; on geology, by Professor Meek; and on glaciers, by Professor Agassiz.

I have the honor to be, very respectfully, your obedient servant.

JOSEPH HENRY,

*President of the National Academy of Sciences.*

Hon. GEO. M. ROBESON,

*Secretary of the Navy.*

#### *Instructions.*

#### GENERAL DIRECTIONS IN REGARD TO THE MODE OF KEEPING RECORDS.

*Record of observations.*—It is of the first importance that in all instrumental observations the fullest record be made, and that the original notes be preserved carefully.

In all cases the actual instrumental readings must be recorded, and if any corrections are to be applied, the reason for these corrections must also be recorded. For instance, it is not sufficient to state the

index error of a sextant; the manner of ascertaining it and the readings taken for the purpose must be recorded.

The log-book should contain a continuous narrative of all that is done by the expedition, and of all incidents which occur on shipboard, and a similar journal should be kept by each sledge party. The actual observations for determining time, latitude, the sun's bearing, and all notes having reference to mapping the shore, soundings, temperature, &c., should be entered in the log-book or journal in the regular order of occurrence. When scientific observations are more fully recorded in the note-books of the scientific observer than can be conveniently transcribed into the log-book, the fact of the observation and reference to the note book should be entered.

The evidence of the genuineness of the observations brought back should be of the most irrefragable character. No erasures whatever with rubber or knife should be made. When an entry requires correction, the figures or words should be merely crossed by a line and the correct figures written above.—[J. E. H.]

#### ASTRONOMY.

*Astronomical observations.*—One of the chronometers, the most valuable, if there is any difference, should be selected as the standard by which all observations are to be made, as far as practicable. The other chronometers should all be compared with this every day at the time of winding, and the comparisons entered in the astronomical note-book.

When practicable, the altitude or zenith distance of the sun should be taken four times a day—morning and evening for time; noon and midnight for latitude. The chronometer or watch times of the latitude observations, as well as of the time observations, should always be recorded. Each observation should always be repeated at least three times in all, to detect any mistake.

When the moon is visible, three measures of her altitude should be taken about the time of her passage over each cardinal point of true bearing, and the chronometer time of each altitude should be recorded.

As the Greenwich time deduced from the chronometers will be quite unreliable after the first six months, it will be necessary to have recourse to lunar distances. These should be measured from the sun, in preference to a star, whenever it is practicable to do so.

If a sextant is used in observation, a measure of the semi-diameter of the sun or moon should be taken every day or two for index error.

The observations are by no means to be pretermitted when lying in port, because they will help to correct the position of the port.

The observations should, if convenient, be taken so near the standard chronometer that the observer can signal the moment of observation to an assistant at the chronometer, who is to note the time. If this is not found convenient, and a comparing watch is used, the watch time and the comparison of the watch with the chronometer should both be carefully recorded.

The observations made by the main party should be all written down in full in a continuous series of note-books, from which they may be copied in the log. Particular care should be exercised in always recording the *place, date, and limb* of sun or moon observed, and any other particulars necessary to the complete understanding of the observation.—[S. N.]

*Observations at winter quarters.*—The astronomical transit instrument will be set up in a suitable observatory. A meridian mark should be

established as soon as practicable, and the instrument kept with constant care in the vertical plane passing through the mark, in order that all observations may be brought to bear on determining the declination of that plane from the meridian of the places. The transits of circumpolar stars, on both sides of the pole, and those of stars near the equator should be frequently observed.

Moon culminations, including the transits of both first and last limbs, should be observed for the determination of longitude independently of the rates of the chronometers. Twelve transits of each limb a desirable number to obtain—more, if practicable. If any occultations of bright stars by the moon are visible, they should be likewise observed.

The observations for latitude will be made with the sextant and artificial horizon, upon stars both north and south of the zenith.

All the chronometers of the expedition should be compared daily, as nearly as practicable about the same time.

Whenever a party leaves the permanent station for an expedition, and immediately upon its return, its chronometer should be compared with the standard chronometer of the station.

*Observations during sledge or boat journeys.*—The instruments to be taken are the small Casella theodolite, or a pocket sextant and artificial horizon, one or more chronometers, and a prismatic compass, for taking magnetic bearings of the sun. In very high latitudes the time of the sun's meridian altitude is not readily determined; it will be advisable, therefore, to take altitudes when the sun is near the meridian, as indicated by the compass, with regard to the variations of the compass derived from an isogonic chart. The time when the observations are taken will, of course, be noted by the chronometer. Altitudes should be taken in this way, both to the south and north of the zenith; this will enable the traveler to obtain his latitude at once very nearly, without the more laborious computation of the time.

The observations for time should be taken as nearly as may be when the sun is at right angles to the meridian, to the east and west, then a compass being again used to ascertain the proper direction. This mode of proceeding will call for observations of altitude at or near the cardinal points, or nearly six hours apart in time.

When the party changes its place in the interval between the observations, it is necessary to have some estimate of the distance and direction traveled. The ultimate mapping of the route will depend upon the astronomical observations, but no pains should be spared to make a record every hour of the estimated distance traveled—by log, if afloat—of the direction of the route, by compass, and bearings of distant objects, such as peaks, or marked headlands, which the route may be plotted.

In case of a few days' halt being made when a very high latitude has been reached, or at any time during the summer's explorations, a special object of care should be to ascertain the actual rate of the chronometer with the party. To this end, a well-defined, fixed object, in any direction, should be selected as a mark, the theodolite pointed on it, and the transit of the sun over its vertical observed on every day during the sojourn at the place. If the party be only provided with a sextant, the same angular distances of the sun from a fixed object should be observed on successive days, the angles being chosen so as to be between  $30^\circ$  and  $45^\circ$ . For instance, set the sextant successively to  $30^\circ 20'$ ,  $40^\circ 40'$ , &c., and note the time when the sun's limb comes in contact with the object. The same distances will be found after two or four hours, with a correction for change in the sun's declination. The

Altitude should be observed before and after these observations, and its magnetic bearing should be noted, as well as that of the mark. The altitude of the mark should also be observed, if practicable, either with the sextant or clinometer, but this is not essential.—[J. E. H.]

#### MAGNETISM.

On the voyage and sledge-journey, at all times when traveling, the *direction* or *variation* of the compass should be obtained by observing the magnetic bearing of the sun, at least once every day on which the sun is visible. On shipboard or in boats the azimuth compass is to be used; on land the small theodolite will be found preferable.

When afloat, no valuable observations of the magnetic *dip* and *intensity* are practicable. On the sledge-journey the dip-circle may be carried, and when halts are made longer than necessary to determine the time by astronomical observations, the *dip* and relative *intensity*, according to Lloyd's method, should be ascertained.

At winter-quarters, in addition to the above-mentioned observations, those of *absolute horizontal intensity* should be made with the theodolite magnetometer, including the determination of moment of inertia. Also with the same instrument the absolute declination should be determined.

The least that the observer should be satisfied with is the complete determination of the three magnetic elements, namely, declination, dip, and horizontal intensity. At one period, say within one week, three determinations of each should be made.

It is advisable that the same observations be repeated on three successive days of each month during the stay at one place; and that on the 1st, 11th, and 21st, or any other days, the variation of the declination-magnet be read every half hour during the twenty-four hours; also that the magnetometer, or at least a theodolite with compass, remain mounted at all times, that the variation of the needle may be observed as often as practicable, and especially when the usual displays of *aurora borealis* take place.

In all cases the *time*, which forms an essential part of the record, should be carefully noted.

Not long before starting on a sledge-journey from a winter station, and soon after returning, the observations with the loaded dipping-compass for relative intensity should be repeated, in order to have a trustworthy comparison for the observations which have been made on the voyage.

#### FORCE OF GRAVITY.

As the long winter affords ample leisure, pendulum experiments may be made to determine the force of gravity, in comparison with that at Washington, where observations have been made with the Hayes pendulum sent to the expedition. The record of the Washington observations, a copy of which is furnished, will serve as a guide in making the observations. Special care should be taken while they are in progress to determine the rate of the chronometer with great precision, by observations of numerous stars with the astronomical transit instrument, the pointing of which on a fixed mark should be frequently verified.

#### OCEAN PHYSICS.

*Depth.*—Soundings should be taken frequently, when in moderate depths, at least sufficiently often to give some indication of the general

depth of the strait or sound in which the vessel is afloat at the time. If an open sea be reached, it should be considered of the greatest importance to get some measure of its depth, and since no bulky sounding apparatus can be carried across the ice barrier, the boat party should be provided with 1,000 fathoms of small twine, marked in lengths of 10 fathoms. Stones, taken on board when the boat is launched, may serve as weights.

*Bottom* should be brought up whenever practicable, and specimen preserved. Circumstances of time and opportunity must determine whether a *dredge* can be used, or merely a *specimen-cup*.

*Temperature* of the sea should be observed with the "Miller protection bulb thermometer," made by Casella, near the surface, about two fathoms below the surface, and near the bottom. When time permits, observations at an intermediate depth should be taken. These observations have a particular bearing on the general circulation of the ocean, and are of great importance.

*Tides*.—Observations of high and low water, as to time and height, should be made continuously at winter-quarters. The method adopted by Dr. Hays is recommended. It consists of a graduated staff anchored to the bottom, directly under the "ice-hole," by a mushroom anchor, or heavy stone and a chain, which is kept stretched by a counter-weight attached to a rope that passes over a pulley rigged overhead. The readings are taken by the height of the water in the "ice-hole." In the course of a few days' careful observations, the periods of high and low water will become sufficiently well known to predict the turn, approximating from day to day, and subsequently, observations taken every five minutes for half an hour, about the anticipated turn will suffice, provided they be continued until the turn of tide has become well marked.

Tidal observations taken at other points, when a halt is made for some time, even if continued not longer than a week, will be of special value, as affording an indication as to the direction in which the tide wave is progressing, and inferentially, as to the proximity of an open sea. If, as the expedition proceeds, the tide is found to be later, the indication is that the open sea is far distant, if indeed the channel is not closed. But if the tide occurs earlier, as the ship advances, the probability is strongly in favor of the near approach to an open, deep sea, communicating directly with the Atlantic Ocean.

In making such a comparison, attention must be paid to the seasonal monthly inequality in the time of high water, which may be approximately taken from the observations at winter quarters. Observations made at the same age of the moon, in different places, may be directly compared.

When the water is open, the tide may be observed by means of a graduated pole stuck into the bottom; or, if that cannot be conveniently done, by means of a marked line, anchored to the bottom, and floated by a light buoy, the observation being taken by hauling up the line fast over the anchor.

*Currents*.—It is extremely desirable to obtain some idea of the currents in the open polar sea, if such is found. No special observation can be indicated, however, except those of the drift of icebergs, if any should be seen.

*Density*.—The density of the sea-water should be frequently observed with delicate hydrometers, giving direct indications to the fourth decimal. Whenever practicable, water should be brought up from different depths, and its density tested. The specimens should be preserved

in carefully sealed bottles, with a view to the subsequent determination of their mineral contents.—[J. E. H.]

#### METEOROLOGY.

The expedition is well supplied with meteorological instruments, all the standards, with the exception of the mercurial barometers, manufactured by Casella, and compared with the standards of the Kew Observatory under the direction of Professor Balfour Stewart. Dr. Bessels is so familiar with the use of instruments, and so well acquainted with the principles of meteorology, that minute instructions are unnecessary. We shall therefore merely call attention, by way of remembrance, to the several points worthy of special notice.

**Temperature.**—The registers of the temperature, as well as of the barometer, direction of the wind, and moisture of the atmosphere, should, in all cases in which it is possible, be made hourly, and when that cannot be done, they should be made at intervals of two, three, four, or six hours. The temperature of the water of the ocean, as well as of the air, should be taken during the sailing of the vessel.

The minimum temperature of the ice, while in winter-quarters, should be noted from time to time, perhaps at different depths, also that of the water beneath.

The temperature of the black-bulb thermometer *in vacuo* exposed to the sun, and also that of the black-bulb free to the air, should be frequently observed while the sun is on the meridian, and at given altitudes in the forenoon and afternoon, and these observations compared with those of the ordinary thermometer in the shade.

Experiments should also be made with a thermometer in the focus of the silvered mirror, the face of which is directed to the sky. For this purpose the ordinary black-bulb thermometer may be used as well as the naked-bulb thermometer. The thermometer thus placed will generally indicate a lower temperature than one freely exposed to radiation from the ground and terrestrial objects, and in case of isolated clouds will probably serve to indicate those which are colder and perhaps higher.

Comparison may also be made between the temperature at different distances above the earth, by suspending thermometers on a spar at different heights.

The temperature of deep soundings should be taken with the thermometer with a guard to obviate the pressure of the water. As the tendency, on account of the revolution of the earth, is constantly to deflect all currents to the right hand of the observer looking down stream, the variations in temperature in connection with this fact may serve to assist in indicating the existence, source, and direction of currents.

The depth of frost should be ascertained, and also, if possible, the point of invariable temperature. For this purpose, augers and drills with long stems for boring deeply should be provided.

**Pressure of air.**—A series of comparative observations should be made of the indications of the mercurial and aneroid barometers. The latter will be affected by the variation of gravity as well as of temperature, while the former will require a correction due only to heat and capillarity.

As it is known that the normal height of the barometer varies in different latitudes, accurate observations in the arctic regions, with this instrument, are very desirable, especially in connection with observations on the moisture of the atmosphere, since, to the small quantity of

this in northern latitudes the low barometer, which is observed there, has been attributed. I think, however, it will be found that the true cause is in the rotation of the earth on its axis, which, if sufficiently rapid, would project all the air from the pole.

In the latitude of about 60, there is a belt around the earth in which the barometer stands unusually high, and in which violent fluctuations occur. This will probably be exhibited in the projection of the curve representing the normal height of the barometrical column in different latitudes.

*Moisture.*—The two instruments for determining the moisture in the air are the wet and dry bulb thermometer and the dew-point instrument, as improved by Regnault. But to determine the exact quantity in the atmosphere in the arctic regions will require the use of an aspirator, by which a given quantity of air can be passed through an absorbing substance, such as chloride of calcium, and the increase of weight accurately ascertained. It may, however, be readily shown that the amount is very small in still air.

A wind from a more southern latitude will increase the moisture, and may give rise to fogs. Sometimes, from openings in the ice, vapor may be exhaled from water of a higher temperature than the air, and be immediately precipitated into fog.

The inconvenience which is felt from the moisture which exhales with the breath in the hold of the vessel may, perhaps, be obviated by adopting the ingenious expedient of one of the arctic voyagers, viz, by making a number of holes through the deck and inverting over them a large metallic vessel like a pot. The exterior of this vessel being exposed to the low temperature of the air without, would condense the moisture from within on its interior surface, and thus serve, on the principle of the diffusion of vapor, to desiccate the air below.

The variation of moisture in the atmosphere performs a very important part in all meteorological changes. Its effects, however, are probably less marked in the arctic regions than in more southern latitudes. The first effect of the introduction into the atmosphere of moisture is to expand the air and to diminish its weight; but after an equilibrium has taken place, it exists, as it were, as an independent atmosphere, and thus increases the pressure. These opposite effects render the phenomena exceedingly complex.

*Winds.*—As to these, the following observations are to be regularly and carefully registered, namely: The average velocity as indicated by Robinson's anemometer; the hour at which any remarkable change takes place in their direction; the course of their veering; the existence at the same time of currents in different directions, as indicated by the clouds; the time of beginning and ending of hot or cold winds, and the direction from which they come. Observations on the force and direction of the wind are very important. The form of the wind-vane should be that of which the feather part consists of two planes, forming between them an angle of about 10°. The sensibility of this instrument, provided its weight be not too much increased, is in proportion to the surface of the feather planes. Great care must be taken to enter the direction of the wind from the true meridian, whenever this can be obtained, and in all cases to indicate whether the entries refer to the true or magnetic north. Much uncertainty has arisen on account of the neglect of this precaution.

In accordance with the results obtained by Professor Coffin, in his work on the resultant direction of the wind, there are, in the northern hemisphere, three systems roughly corresponding with the different



zones, viz, the tropical, in which the resultant motion is toward the west, the temperate, toward the east, and the arctic, in which it is again toward the west.

In the discussion of all the observations, the variation of the temperature and the moisture will appear, in their connection with the direction of the wind. Hence the importance of simultaneous observations on these elements, and also on the atmospheric pressure.

*Precipitation.*—The expedition will be furnished with a number of rain-gauges, the contents of which should be measured after each shower. By inverting and pressing them downward into the snow, and subsequently ascertaining, by melting in the same vessel, the amount of water produced, they will serve to give the precipitation of water in the form of snow. The depth of snow can be measured by an ordinary measuring-rod. Much difficulty, however, is sometimes experienced in obtaining the depth of snow on account of its drifting, and it is sometimes not easy to distinguish whether snow is actually falling or merely being driven by the wind.

The character of the snow should be noted, whether it is in small rounded masses, or in regular crystals; also the conditions under which these different forms are produced.

The form and weight of hailstones should be noted, whether consisting of alternate strata, the number of which is important, of flocculent snow, or solid ice, or agglutinations of angular crystals, whether of a spherical form, or that of an oblate spheroid.

The color of the snow should be observed in order to detect any organisms which it may contain, and also any sediment which may remain after evaporation, whether of earthy or vegetable matter.

*Clouds.*—The character of the clouds should be described, and the direction of motion of the lower and the higher ones registered, at the times prescribed for the other observations. Since the expedition is well supplied with photographic apparatus, frequent views of the clouds and of the general aspect of the sky should be taken.

*Aurora.*—Every phase of the aurora borealis will of course be recorded; also the exact time of first appearance of the meteor, when it assumes the form of an arch or a corona, and when any important change in its general aspect takes place. The magnetic bearing of the crown of the arch, and its altitude at a given time, should be taken; also, if it moves to the south of the observer, the time when it passes the zenith should be noted. The time and position of a corona are very important.

Two distinct arches have sometimes been seen co-existing—one in the east and the other in the west. In such an exhibition, the position of the crown of each arch should be determined. Drawings of the aurora, with colored crayons, are very desirable. In lower latitudes a dark segment is usually observed beneath the arch, the occurrence of which, and the degree of darkness, should be registered. It also sometimes happens that a sudden precipitation of moisture in the form of a haziness is observed to cover the face of the sky during the shooting of the beams of the aurora. Any appearance of this kind is worthy of attention.

Wave motions are sometimes observed, and it would be interesting to note whether these are from east to west or in the contrary direction, and whether they have any relation to the direction of the wind at the time. The colors of the beams and the order of their changes may be important in forming a theory of the cause of the phenomena. Any similarity of appearance to the phenomena exhibited in Geissler's tubes

should be noted, especially whether there is anything like stratification.

The aurora should be frequently examined by the spectroscope, and the bright lines which may be seen, carefully compared with one of Kirchhoff's maps of the solar spectrum.

To settle the question as to the fluorescence of the aurora and its consequent connection with the electric discharge, a cone of light reflected from the silver-plated mirror should be thrown on a piece of white paper, on which characters have been traced with a brush dipped in sulphate of quinine. By thus condensing the light on the paper, any fluorescence which the ray may contain will be indicated by the appearance of the previously invisible characters in a green color.

Careful observations should be made to ascertain whether the aurora ever appears over an expanse of thick ice, or only over land or open water, ice being a non-conductor of electricity.

The question whether the aurora is ever accompanied with a noise has often been agitated, but not yet apparently definitely settled. Attention should be given to this point, and perhaps the result may be rendered more definite by the use of two ear-trumpets, one applied to each ear.

According to Hansteen, the aurora consists of luminous beams, parallel to the dipping needle, which at the time of the formation of the corona are shooting up on all sides of the observer, and also the lower portions of these beams are generally invisible. It is, therefore, interesting to observe whether the auroral beams are ever interposed between the observer and a distant mountain or cloud, especially when looking either to the east or west.

The effect of the aurora on the magnetism of the earth will be observed by abnormal motion of the magnetic instruments for observing the declination, inclination, and intensity. This effect, however, may be more strikingly exhibited by means of a galvanometer, inserted near one end of a long insulated wire extended in a straight line, the two extremities of which are connected with plates of metal plunged in the water, it may be through holes in the ice, or immediately connected with the ground.

To ascertain whether the effect on the needle is due to an electrical current in the earth, or to an inductive action from without, perhaps the following variation of the preceding arrangement would serve to give some indication. Instead of terminating the wire in a plate of metal, plunged in the water, let each end be terminated in a large metallic insulated surface, such, for example, as a large wooden disk, rounded at the edges and covered with tin-foil. If the action be purely inductive, the needle of the galvanometer inserted, say, near one end of the wire, would probably indicate a momentary current in one direction, and another in the opposite, at the moment of the cessation of the action. For the purpose of carrying out this investigation, the Smithsonian Institution has furnished the expedition with two reels of covered wire, each a mile in length, one of which is to be stretched in the direction, perhaps, of the magnetic meridian, and the other at right angles to it. It would be well, however, to observe the effect with the wires in various directions, or united in one continuous length.

*Electricity.*—From the small amount of moisture in the atmosphere, and the consequent insulating capacity of the latter, all disturbances of the electrical equilibrium will be seen in the frequent production of light and sparks on the friction and agitation of all partially non-conducting substances. Any unusual occurrences of this kind, such as

electrical discharges from pointed rods, from the end of spars, or from the fingers of the observer, should be recorded.

A regular series of observations should be made on the character and intensity of the electricity of the atmosphere by means of an electrometer, furnished with a polished, insulated, metallic ball, several inches in diameter, and two piles of Deluc to indicate the character of the electricity, whether + or —; and also supplied with a scale to measure, by the divergency of a needle, the degree of intensity. This instrument can be used either to indicate the electricity of the air by induction or by conduction. In the first case it is only necessary to elevate it above a normal plane by means of a flight of steps, say eight or ten feet, to touch the ball at this elevation and again to restore it to its first position, when it will be found charged with electricity of the same character as that of the air. Or the ball may be brought in contact with the lower end of an insulated metallic wire, to the upper end of which is attached a lighted piece of twisted paper which had been dried after previous saturation in a solution of nitrate of lead.

Thunder-storms are rare in the arctic regions, although they sometimes occur; and in this case it is important to observe the point in the horizon in which the storm-cloud arises; also the direction of the wind during the passage of the storm over the place of the observer; and also the character of the lightning—whether zig-zag, ramified, or direct; also its direction—whether from cloud to cloud, or from a cloud to the earth.

*Optical phenomena.*—Mirage should always be noted, as it serves to indicate the position of strata of greater or less density, which may be produced by open water, as in the case of lateral mirage, or by a current of wind or warmer air along the surface.

The polarization of the light of the sky can be observed by means of a polariscope, consisting of a plate of tourmaline with a slice of Iceland spar, or a crystal of niter cut at right angles to its optical axis, on the side farthest from the eye. With this simple instrument the fact of polarization is readily detected, as well as the plane in which it is exhibited.

Halos, parhelia, coronæ, luminous arches, and glories should all be noted, both as to time of appearance and any peculiarity of condition of the atmosphere. Some of these phenomena have been seen on the surface of the ice by the reflection of the sun's beams, from a surface on which crystals had been formed by the freezing of a fog simultaneously with a similar appearance in the sky, the former being a continuation, as it were, and not a reflection of the latter.

In the latitude of Washington, immediately after the sun has sunk below the western horizon, there frequently appear faint parallel bands of colors just above the eastern horizon, which may very possibly be due to the dispersion of the light by the convex form of the atmosphere, and also, at some times, slightly-colored beams crossing the heavens like meridians, and converging to a point in the eastern horizon. Any appearance of this kind should be carefully noted and described.

*Meteors.*—Shooting-stars and meteors of all kinds should be observed with the spectroscope. The direction and length of their motion should be traced on star-maps, and special attention given at the stated periods in August and November. A remarkable disturbance of the aurora has been seen during the passage of a meteor through its beams. Any phenomenon of this kind should be minutely described.

*Ozone.*—The expedition is furnished with a quantity of ozone test-paper, observations with which can only be rendered comparabl-

projecting against the sensitized paper a given quantity of atmospheric air. For this purpose an aspirator should be used, which may be made by fastening together two small casks, one of which is filled with water, with their axes parallel, by means of a piece of plank nailed across the heads, through the middle of which is passed an iron axis, on which the two casks may be made to revolve, and the full cask may readily be placed above the empty so that its contents may gradually descend into the latter. During the running of the water from the upper cask, an equal quantity of air is drawn through a small adjutage into a closed vessel and made to impinge upon the test-paper. The vessel containing the test-paper should be united with the aspirator by means of an India-rubber tube.

*Miscellaneous.*—The conduction of sound during still weather, through the air over the ice, through the ice itself, and through the water, may be studied.

Evaporation of snow, ice, and water may be measured by a balance, of which the pan is of a given dimension.

Experiments on the resistance of water to freezing in a confined space at a low temperature may be made with small bombshells closed with screw-plugs of iron. The fact of the liquidity of the water at a very low temperature may be determined by the percussion of a small iron bullet, or by simply inverting the shell, when the ball, if the liquid remains unfrozen, will be found at the lowest point. It might be better, however, to employ vessels of wrought iron especially prepared for the purpose, since the porosity of cast iron is such that the water will be forced through the pores, *e. g.*, the lower end of a gun-barrel, which, from the smallness of its diameter, will sustain an immense pressure, and through which the percussion of the inclosed bullet may be more readily heard. Water, in a thin metallic vessel, exposed on all sides to the cold, sometimes gives rise to hollow crystals of a remarkable shape and size, projecting above the level surface of the water, and exhibits phenomena worthy of study.

Experiments may be made on regulation, the plasticity of ice, the consolidation of snow into ice, the expansion of ice, its conducting power for heat, and the various forms of its crystallization. The effect of intense cold should be studied on potassium, sodium, and other substances, especially in relation to their oxidation.

The melting-point of mercury should be observed, particularly as a means of correcting the graduation of thermometers at low temperatures. The resistance to freezing of minute drops of mercury, as has been stated, should be tested. Facts long observed, when studied under new conditions, scarcely ever fail to yield new and interesting results.—[J. H.]

#### NATURAL HISTORY.

Objects of natural history of all kinds should be collected, and in as large numbers as possible. For this purpose all on board the vessel, both officers and sailors, should be required to collect, upon every favorable opportunity, and to deliver the specimens obtained to those appointed to have charge of them.

*Zoology.*—The terrestrial mammals of Greenland are pretty well known, but it is still desirable that a series, as complete as possible, of the skins should be preserved, great care being taken to always indicate, upon the label to be attached, the sex and probable age, as well as the locality and date of capture. The skeleton, and, when it is not possible to get this complete, any detached bones, particularly the skull and attached

cervical vertebrae, are very desirable. Interesting soft parts, especially the brain, and also embryos, are very important. If it should be considered necessary to record measurements, they should be taken from specimens recently killed.

Of walruses and seals, there should be collected as many skeletons as possible, of old and young individuals; also skins, especially of the seals. Notes should be made regarding the habits in general, food, period of copulation, duration of gestation and time of migration, it being desirable to find out whether their migrations are periodical.

Of the *Cetacea*, when these are too large to be taken on board the vessel, the skull and cervical vertebrae, the bones of the extremities and penis, and whatever else may be deemed worthy of preservation, should be secured. All the animals should be examined for ecto and entoparasites, and the means by which they become affixed to the animals noted.

Collect carefully the species of *Myodes*, (*lemmings*), *Arctomys*, and *Arvicola*, so as to determine the variations with locality and season. The relationship of two kinds of foxes, the blue and white, should be studied to determine their specific or other relationship. Any brown bears should be carefully collected, both skin and skeleton, to determine whether identical or not with the Old World *Ursus arctus*.

Reference has already been made to the seals and cetaceans; of these the *Phoca cristata*, the white whale, (*Beluga*), and the *Monodon* are particularly desired.

What has been said in regard to the mammals will apply equally well to the *birds*, skins and skeletons being equally desirable. It is especially important that the *fresh colors* of the bill, cere, gums, eyes, and feet, or caruncles, or bare skin, if there be any, should be noted, as the colors of these parts all change after the preparation of a specimen.

Of birds, the smaller land species are of the greatest interest, and complete series of them should be gathered. The northern range of the insectivorous species should be especially inquired into. The arctic falcons should be collected in all their varieties, to ascertain whether there are two forms, a brown and a white, distinct through life, or whether one changes with age into the other.

Inquiry should be directed to the occurrence of *Bernicla leucopsis*, *Anser cinereus*, or other large gray geese, and the *Camptolamus Labrador*, and a large number of specimens, of the latter especially, should be obtained. Indeed the geese and ducks generally should form subjects of special examination. Among the *Laridae* the most important species is the *Larus roxii* or *Rhodostethia rosea*, scarcely known in collections. A large number of skins and eggs will be a valuable acquisition. *Larus churruensis* is also worthy of being collected. The *Alcidae* should be carefully examined for any new forms, and inquiries directed in regard to the *Alca impennis*.

Of all birds' eggs an ample store should be gathered; and the skeletons of the *Arctic raptora* and the *Natatores* generally.

It will be a matter of much importance to ascertain what is the extreme northern range of the continental species of birds, and whether, in the highest latitudes, the European forms known to occur in Greenland cross Baffin's Bay.

Eggs and nests of birds, in as large numbers as possible, should be procured, great care being taken, however, in all cases to identify them by the parents which may be shot, and some portion, if not all of them, preserved, if not recognized by the collector. All the eggs of one set should be marked with the same number, that they may not be separ-

ated; the parent bird, if collected, likewise receiving the same number. It should also be stated, if known, how long the eggs have been set upon, as incubation influences very much their color; the situation of the nest also is very important. Notes on the manner of nesting, localities selected, and other peculiarities of breeding, should be carefully kept; whether they are polygamous, whether there are struggles between the males, and the manner in which the old birds feed their young; and whether these remain helpless in the nest for a given time, or whether they accompany the parents from birth. A journal of the arrival and departure of the migratory species should also be kept, to find out whether those which leave latest return earliest, and *vice versa*.

Of fishes that are obtained, the best specimens should be photographed, the fresh colors noted, and then they should be preserved in alcohol or carbolic acid.

Among the fishes the *Salmonidæ*, *Cottidæ*, *Gadidæ* and *Clupeidæ*, will be of most interest, and good series should be secured.

The terrestrial inferior animals should be all collected, each class in its appropriate way.

Try to get larvæ of insects, and observe their life, whether they are well adapted to their surroundings; for in proportion to the insects are the number of insectivorous animals, and for that reason the struggle for life would be more energetic, and, therefore, only those insects which are best adapted to the conditions will survive.

Inferior marine animals are usually collected by two methods, viz, with a pelagic net and by a dredge. Both these methods should be employed whenever practicable. Especial attention should be paid to the larvæ, of which sketches should be made. The results of the dredging should be noted in blanks printed for this purpose, the specimens to be preserved as their constitution requires. Muller's liquor, glycerine, solution of alcohol and sugar, &c.

It would be of peculiar interest to study the several deep regions, admitted by Forbes and others, to ascertain if in the arctic regions the intensity of color increases with the depth, as has been stated to be the case with red and violet, which, if true, would be just the contrary to what is observed in the temperate and tropical regions.

Of shells two sets should be preserved, one dry and the other *with the animal*, in alcohol; the dry shell is necessary from the fact that the alcohol, by the acetic acid produced, is apt to destroy the color.

It is particularly important to get as full a series as possible of the members of the smaller families, with a view to the preparation of monographs.

There should be paid as much attention as possible to the fauna of fresh-water lakes to ascertain whether they contain marine forms, as has been found to be the case with some of those in North America, Scandinavia, Italy, and other countries. From this, important conclusions regarding the rising of the coast may be arrived at.

*Botany*.—Plants are to be collected in two ways. Of each species some specimens should be put in alcohol to serve for studying the anatomy; the others to be dried between sheets of blotting-paper. The locality of each specimen should be noted; also its situation, the character of the soil and height above the sea, the season, and whether there is *heliotropismus*, &c., &c. In the general notes there should be remarks on the horizontal and vertical distribution.—[S. F. B.]

## GEOLOGY.

The most important point in the collection of geological specimens, whether they consist of rocks, minerals, or fossils, is, that on breaking or digging them from the matrix or bed, each individual specimen should be carefully wrapped separately in pliable but strong paper, with a label designating the exact locality from which it was obtained. If two or more beds of rock (sandstone, limestone, clay, marl, or other material) occur at the locality from which specimens are taken, the label should also have a number on it corresponding to the particular bed in which it was found, as designated in a section made on the spot in a note-book. This should be done in order that the specimens from each bed may be separated from those found in others, whether the beds are separable by differences of composition or by differences in the groups of fossils found in each; and it is, moreover, often important that this care should be observed, even when one or more of the beds are of inconsiderable thickness, if such beds are characterized by peculiar fossils. For in such cases it often happens that what may be a mere seam at one place may represent an important formation at another.

Specimens taken directly from rocks in place are, of course, usually more instructive than those found loose; but it often happens that much better specimens of fossils can be found already weathered out, and lying detached about an outcrop of hard rock, than can be broken from it. These can generally be referred to their place in the section noted at the locality, by adhering portions of the matrix, or from finding more or less perfect examples of the same species in the beds in place; but it is usually the better plan to note on the labels of such specimens that they were found loose, especially if there are any evidences that they may have been transported from some other locality by drift agencies.

All exposures of rocks, and especially those of limestone, should be carefully examined for fossils, for it often happens that hard limestones and other rocks that show no traces of organic remains on the natural surfaces, (covered, as they often are, with lichens and mosses,) will be found to contain fossils when broken into. In cases where fossils are found to exist in a hard rock, if time and other circumstances permit, it is desirable that it should be vigorously broken with a heavy hammer provided for that purpose, and as many specimens of the fossils as possible (or as the means of transportation will permit) should be collected.

Fossils from rocks of all ages will, of course, be interesting and instructive, but it is particularly desirable that organic remains found in the later tertiary and quaternary formations of these high northern latitudes, if any such exist there, should be collected. These, whether of animals or plants, would throw much light on the question respecting the climatic conditions of the polar regions at or just preceding the advent of man.

Specimens illustrating the lithological character of all the rocks observed in each district explored should also be collected, as well as of the organic remains found in fossiliferous beds; also, of all kinds of minerals. Those of rocks and amorphous minerals should be trimmed to as nearly the same size and form as can conveniently be done—say 3 by 4 inches wide and long and  $1\frac{1}{4}$  inches in thickness. Crystalline minerals ought, of course, to be broken from the matrix, rather with the view of preserving the crystals, as far as possible, than with regard

to the size or form of the hand specimens; and the same remark applies equally to fossils.

On an overland journey the circumstances may *not always* be such as to allow the necessary time to wrap carefully and label specimens on the spot where they were collected; but in such cases numbers, or some other marks, should be scratched with the point of a knife, or other hard-pointed instrument, on each, by means of which the specimens collected at different times and places during the march can be correctly separated, labeled, and wrapped when the party stops for rest.

All specimens should be packed tightly in boxes as soon as enough have been collected to fill a box, and a label should be attached to each box indicating the particular district of country in which the collections were obtained. For this purpose, empty provision boxes or packages can generally be used.

In examining sections or exposures of rocks along a shore or elsewhere, it is a good plan to make a rough sketch in a note-book, thus:

SECTION 1.

5	Clay.	8 feet.
4	Shale.	7 feet.
3	Clay.	12 feet.
2	Sandstone.	12 feet.
1	Limestone.	10 feet.

Then, on the same or following pages, more particular descriptions of the nature and composition of the several beds should be written, referring to each by its number. Sections of this kind should be numbered 1, 2, 3, and so on, in the order in which they were observed, and the specimens from each bed ought also to be numbered on its label, so as to correspond. That is, specimens from the lowest bed of the first section should be, for instance, marked thus: "Section No. 1, bed No. 1," and so on. The name of the locality, however, should also, as already suggested, be written on the labels as a provision against the possible loss of note-books.

It generally happens that an outcrop will show only a part of the beds of which it is composed, thus:

5	Unexposed.	10 feet.
4	Limestone.	7 feet.
3	Unexposed space.	8 feet.
2	Limestone.	11 feet.
1	Sandstone.	15 feet.

In such a case the facts should be noted exactly as seen, without any attempt to guess at the nature of the material that may fill the unex-



posed spaces; but generally, by comparing different sections of this kind taken in the same region, the entire structure of a district may be made out.

The dip and strike of strata should also be carefully observed and noted, as well as the occurrence of dikes or other outbursts of igneous rocks, and the effects of the latter on the contiguous strata.

All evidences of the elevation or sinking of coasts should likewise be carefully observed and noted.

Especial attention should be given to glacial phenomena of every kind, such as the formation, size, movements, &c., of existing glaciers, their abrading and other effects upon the subjacent rocks, their formation of moraines, &c.; also, the formation, extent, and movements of icebergs, and their power of transporting masses of rock, &c.

At Cape Fraser, between latitude 50° north and longitude 70° west, Dr. Hayes found some upper silurian fossils in a hard gray limestone. This rock doubtless has a rather wide extension in the country referred to, as other explorers have brought silurian fossils from several localities further southward and westward in this distant northern region. Should the party visit the locality from which Dr. Hayes collected his specimens, it is desirable that as complete a collection as possible should be obtained, as most of those found by Dr. Hayes were lost.

For making geological observations and collecting geological specimens, very few instruments are required. For determining the elevations of mountains and the general altitude of the country, a barometer is sufficiently accurate. For local elevations of less extent, a pocket-level, Locke's, should be provided. Tape lines are also useful for measuring vertical outcrops and other purposes; and a good pocket-compass is indispensable. The latter should have a clinometer attached.

A good supply of well-tempered cast steel hammers should also be provided. They should be of various sizes and forms, and ought to be made with large enough eyes to receive stout handles, of which a good number, made of well-seasoned hickory, should be prepared. Chisels of different sizes should also be prepared of well-tempered steel.

A pouch of leather or stout canvas, with a strap to pass over the shoulder, will be found useful to carry specimens for short distances.—[F. B. M.]

#### GLACIERS.

The progress of our knowledge of glaciers has disclosed two sides of the subject entirely disconnected with one another, and requiring different means of investigation. The study of the structure of glaciers as they exist now, and the phenomena connected with their formation, maintenance, and movement, constitute now an extensive chapter in the physics of the globe. On the other hand, it has been ascertained that glaciers had a much wider range during an earlier, but nevertheless comparatively recent, geological period, and have produced during that period phenomena which, for a long time, were ascribed to other agencies. In any investigation of glaciers now-a-days, the student should keep in mind distinctly these two sides of the subject. He ought also to remember at the outset what is now no longer a mooted point, that, at different times during the glacial period, the accumulations of ice covering larger or smaller areas of the earth's surface have had an ever-varying extension, and that whatever facts are observed, their value will be increased in proportion as the chronological element is kept in view.

From the physical point of view, the arctic expedition under the

command of Captain Hall may render science great service should Dr. Bessels have an opportunity of comparing the present accumulations of ice in the arctic regions with what is known of the glaciers of the Alps and other mountainous regions. In the Alps, the glaciers are fed from troughs in the higher regions, in which snow accumulates during the whole year, but more largely during winter, and by a succession of changes is gradually transformed into harder and harder ice, moving down to lower regions where glaciers never could have been formed. The snow-like accumulations of the upper regions are the materials out of which the compact transparent brittle ice of the lower glaciers is made. Whatever snow falls upon the glaciers in their lower range during winter melts away during summer, and the glacier is chiefly fed from above and wastes away below. The water arising from the melting of the snow at the surface contributes only indirectly to the internal economy of the glacier. It would be superfluous here to rehearse what is known of the internal structure of glaciers and of their movement; it may be found in any treatise on glaciers. Nor would it be of any avail to discuss the value of conflicting views concerning their motion. Suffice it to say that an arctic explorer may add greatly to our knowledge by stating distinctly to what extent the winter snow, falling upon the surface of the great glacial fields of the arctic, melts away during summer and leaves bare an old icy surface covered with fragments of rock, sand, dust, &c. Such an inquiry will teach us in what way the great masses of ice which pour into the Arctic Ocean are formed, and how the supply that empties annually into the Atlantic is replenished. If the winter snows do not melt entirely in the lower part of the arctic glaciers during summer, these glaciers must exhibit a much more regular stratification than the Alpine glaciers, and the successive falls of snow must in them be indicated more distinctly by layers of sand and dust than in those of the Alps by the dirt bands. Observations concerning the amount of waste of the glaciers by evaporation or melting, or what I have called *ablation* of the surface during a given time in different parts of the year, would also be of great interest as bearing upon the hygrometric condition of the atmosphere. A pole sunk sufficiently deep into the ice to withstand the effects of the wind could be used as a meter. But it ought to be sunk so deep that it will serve for a period of many months and rise high enough not to be buried by a snow-storm. It should also be ascertained, if possible, whether water oozes from below the glacier, or, in other words, whether the glacier is frozen to the ground or separated from it by a sheet of water. If practicable, a line of poles should be set out with reference to a rocky peak or any bare surface of rock, in order to determine the motion of the ice. It is a matter of deep interest with reference to questions connected with the former greater extension of glaciers, to know in what manner flat sheets of ice move on even ground, exhibiting no marked slope. It may be possible to ascertain, after a certain time, by the change of position of poles sunk in the ice, whether the motion follows the inequalities of the surface or is determined by the lay of the land and the exposure of the ice to the atmospheric agents, heat, moisture, wind, &c. It would be of great interest to ascertain whether there is any motion during the winter season, or whether motion takes place only during the period when water may trickle through the ice. The polished surfaces in the immediate vicinity of glacier ice exhibit such legible signs of the direction in which the ice moves, that wherever ledges of rocks are exposed, the scratches and furrows upon their surface may serve as a sure register of its progress; but before taking this

as evidence, it should, if possible, be ascertained that such surfaces actually belong to the area over which the adjoining ice moves during its expansion, leaving them bare in its retreat.

The geological agency of glaciers will no doubt receive additional evidence from a careful examination of this point in the arctic regions. A moving sheet of ice, stretching over a rocky surface, leaves such unmistakable marks of its passage that rocky surfaces which have once been *glaciated*, if I may thus express the peculiar action of ice upon rocks, viz, the planing, polishing, scratching, grooving, and furrowing of their surfaces, can never be mistaken for anything else, and may everywhere be recognized by a practiced eye. These marks, in connection with transported loose materials, drift, and boulders, are unmistakable evidence of the great extension which glaciers once had. But here it is important to discriminate between two sets of facts, which have generally been confounded. In the proximity of existing glaciers, these marks and these materials have a direct relation to the present sheet of ice near by. It is plain, for instance, that the polished surfaces about the Grimsel, and the loose materials lying between the glacier of the Aar and the Hospice, are the work of the glacier of the Aar when it extended beyond its present limits, and step by step its greater extension may be traced down to Meyringen, and, in connection with other glaciers from other valleys of the Bernese Oberland, it may be tracked as far as Thun or Berne, when the relation to the Alps becomes complicated with features indicating that the whole valley of Switzerland, between the Alps and the Jura, was once occupied by ice. On the other hand, there are evident signs of the former presence of local glaciers in the Jura, as, for instance, on the Dent de Vaulion, which mark a later era in the history of glaciation in Switzerland. Now the traces of the former existence of extensive sheets of ice over the continent of North America are everywhere most plainly seen, but no one has yet undertaken to determine in what relation these glaciated surfaces of past ages stand to the ice-fields of the present day in the arctics. The scientific men connected with Captain Hall's expedition would render science an important service if they could notice the trend and bearing of all the glacial scratches they may observe upon denudated surfaces wherever they land. It would be advisable for them, if possible, to break off fragments of such glaciated rocks and mark with an arrow their bearing. It would be equally important to notice how far the loose materials, pebbles, boulders, &c., differ in their mineralogical character from the surface on which they rest, and to what extent they are themselves polished, rounded, scratched, or furrowed, and also what is the nature of the clay or sand which holds them together. It would be particularly interesting to learn how far there are angular boulders among these loose materials, and what is their position with reference to the compacted drift made up of rounded, polished, and scratched pebbles and boulders. Should an opportunity occur of tracing the loose materials of any locality to some rock *in situ*, at a greater or less distance, and the nature of the materials should leave no doubt of their identity, this would afford an invaluable indication of the direction in which the loose materials have traveled. Any indication relating to the differences of level among such materials would add to the value of the observation. I have purposely avoided all theoretical considerations, and only call attention to the facts which it is most important to ascertain, in order to have a statement as unbiased as possible.—[L. A.]

# REPORT OF THE SECRETARY OF THE INTERIOR.

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DEPARTMENT OF THE INTERIOR,  
*Washington, D. C., October 31, 1871.*

SIR: I have the honor to submit the following report of the operations of this Department during the year. In preparing it I have compressed it within the narrowest limits possible, and have also embodied such suggestions and recommendations as my observation has convinced me will conduce to the success of the several bureaus under the immediate supervision of this Department.

## INDIAN AFFAIRS.

The humane and peaceful policy which has been inaugurated by the Government in the conduct of Indian affairs for the past two years has been productive of gratifying results. The board of commissioners authorized by the law of April 10, 1869, composed of citizens distinguished for intelligence and philanthropy, and serving without pay, has assisted in withdrawing from the Indian service much that has been heretofore regarded as the source of evil and injustice, and which is supposed to have prevented the success of public measures intended as a means of civilization. The services of that board have exercised a wholesome influence in establishing the new policy, and its active aid and co-operation in carrying out the measures of the Government in that behalf have been valuable to this Department.

The members of the board have visited many of the tribes of Indians in the West during the past year, inspecting their condition, and observing the progress they were making in education. They have also given their personal attention to the awarding of contracts for Indian supplies, and have exercised a careful supervision over the expenditures from the Indian appropriations. Their report will afford a more detailed statement of their transactions.

The most noticeable effect of the new policy thus far has been to suppress Indian wars and depredations, to unite tribes upon reservations designated for them by Government authority, to improve their education in letters, in the practice of agriculture and other industries, in the reformation of prevailing vices, and the generally gratifying evi-

dences of a degree of progress which offers good reason to hope for the gradual social elevation and christianization of the race.

As encouragement to those who believe in the capacity of the Indian for civilization, an examination of the report of the Acting Commissioner will show that the various tribes have raised during the year agricultural products to the value of more than eight millions of dollars, not including the products of the Cherokees, from whom no report has been received, but whose products last year were valued at over two and one-half million dollars, an aggregate of about ten millions of dollars' worth of farm produce. It will also be seen that there are 216 schools among the Indian tribes, with 323 teachers, and an average attendance of 8,920 pupils.

Though this peace policy has been generally maintained, and a better understanding of the designs of the Government toward them prevails among the Indians, excepting a few nomadic tribes in Arizona, New Mexico, and on the western borders of Texas, which have not yet been so fully reached by the influence of the new policy, outrages by those bands or tribes have been punished so promptly by the military authorities, under the influence of which the disposition to make peace is generally manifest.

Some progress is being made towards inducing the more troublesome of those tribes to accept and enter upon reservations, and there is reasonable ground to hope that it will eventually be accomplished.

For this purpose it is of importance that increased and liberal appropriations for food, clothing, and farming implements be made by Congress.

On the line of the North Pacific Railroad, in the Territory of Dakota, the Sioux have also made some offensive demonstrations against the progress of that work, but thus far judicious management has prevented serious outbreak. The hostile disposition of that numerous and powerful tribe may require skillful treatment to avoid hostilities in the future.

Encouragement is afforded to the friends of the existing policy, in the fact that the Indians long in contact with the whites, as in New York, Michigan, and Wisconsin, as also of those whose proximity to the whites is not of so long standing, as in Kansas, Nebraska, and the Indian Territory, have made considerable progress in the arts of civilization, in the cultivation of the soil, or in the pursuit of general business, with success, as well as in their increased efforts in behalf of the education of their youth.

Without progress in industrial pursuits, and in education, we cannot hope for any lasting good results from the new policy, and it should, therefore, be the first effort of the Government to so act as to encourage the Indian in those directions which will induce him to cultivate habits of industry, and foster a desire for mental and moral culture. It might be well to establish a system of compulsory education to such an extent, at least, as to withhold annuities from those individuals who

or neglect to avail themselves of the educational facilities offered. This principle was adopted with the Pawnees in the third article of the treaty of 1857, and with good results.

The encouragement of agriculture might also be effectually secured by the payment of premiums for the best cultivated farm above a certain established standard of excellence.

The latter plan would not probably be productive of its legitimate results while the present system of holding their lands in common prevails, and could only be successfully carried out after the lands were divided.

These changes would entail additional and delicate duties upon agents, and would require increased vigilance in their performance. Under existing laws the salaries of those officers are too small. They should be men who have no desire to speculate upon their offices, and, therefore, should have no income beyond their legal compensation. It is a singular fact, and one, perhaps, not entirely creditable to the Government, that some of the religious denominations which have been requested to name persons for appointment as agents have been compelled, in order to secure good men, to contribute to the support of said agents while in Government employ, on account of the insufficiency of the legal compensation to their support. This is utterly inadequate to their support and every consideration of justice and economy will justify a liberal increase.

To insure a faithful performance of their duties by agents, and to secure uniformity in enforcing the Government policy throughout the various agencies, I would suggest that authority be conferred upon the Secretary of the Interior to appoint inspectors, when necessity requires, whose duty it shall be to visit the several tribes and agencies at stated intervals, and report concerning the fidelity and capacity of the agents and the condition of the tribes under their charge; to enforce uniformity of management, and to suggest such measures of reform as may seem best calculated to promote the general policy of the Government.

I deem it to be my duty, also, to urge an increase of the salary of the Commissioner of Indian Affairs. The present rate of compensation is entirely inadequate to the position. Its duties require the services of a man of intelligence, capacity, and integrity, and he should be so compensated as to secure such services. Five thousand dollars per annum would be a small salary for the services of a proper man in that important place, and, in view of the great influence he would wield in carrying out the present policy, it would be economy to increase the salary to at least the sum named.

The Indian population now under the jurisdiction of the United States, according to the most reliable data to be obtained, is about 331,000. This number includes 75,000, the estimated Indian population of Alaska, and 3,663, scattered throughout the States of Florida, North Carolina, Indiana, Iowa, and Texas, not maintaining tribal relations.

Excluding those in Alaska, and those scattered throughout the States just named, as not practically within the scope of the new policy, and the remaining Indian population is 242,371, located as follows:

Washington Territory.....	15,487	Wyoming.....	2,400
Oregon.....	24,503	Nebraska.....	6,410
California.....	7,333	Kansas.....	6,059
Arizona.....	5,066	Indian Territory.....	53,476
Nevada.....	6,000	Minnesota.....	6,377
Utah.....	12,800	Wisconsin.....	6,353
New Mexico.....	18,641	Michigan.....	8,099
Colorado.....	7,300	New York.....	4,804
Dakota.....	27,815		
Idaho.....	4,469	Total.....	242,371
Montana.....	18,835		

The Indians under the jurisdiction of the United States are now located on reservations of land amounting in the aggregate to 228,473 square miles, or 137,846,971 acres. Deducting from this statement the Indian Territory south of Kansas, and there remains a population of 172,000 occupying reservations of land amounting to 96,155,785 acres; being a *per capita* of 558 acres. The lands composing these reservations are generally of good quality, susceptible of profitable cultivation, and lie in the direct path of the settler. These reservations are generally held under treaties guaranteeing Indian possession against the intrusion of white settlement.

The Indian Territory, so called, lying west of Missouri and Arkansas, and south of Kansas, contains 44,154,240 acres of land, and a population of about 60,000. Westward to the 96° of west longitude the soil is of the very best quality, well watered and timbered, capable of producing the largest returns to the labors of the farmer. West of the 96°, and lying between that and the valley of the Arkansas River, the country is mountainous, and offers less inducements to the settler. The mountains are known to contain very rich deposits of coal, and are supposed to contain other valuable minerals. In the valley of the Arkansas River the soil is of excellent quality for a width of ten miles, while to the west of that valley the entire country, although not so desirable for location as that in the eastern portion of the Territory, is well adapted to the wants of the farmer. The present population of the Territory is but one person to every 630 acres. Could the entire Indian population of the country, excluding Alaska and those scattered among the States heretofore mentioned, be located in the Indian Territory, there would be 180 acres of land, *per capita*, for the entire number, showing that there is an ample area of land to afford them all comfortable homes.

On the other hand, such a disposition of the now scattered tribes would release from Indian occupancy 93,692,731 acres of land, and throw it open to white settlement and cultivation. This gathering together of all the outlying tribes into a comparatively small territory

the problem now before us. The proper solution of it must, in a great measure, decide the fate of that race. If they can be brought to realize their condition as we see it, they will recognize the fact that if they do not speedily accept the friendly offices of the Government, and endeavor in good faith to work out their part of the policy, the difficulties and dangers of their past and present condition will be increased by the increasing demand for the lands now occupied by them as hunting grounds and reservations made by our rapidly growing tide of emigration. Many of the tribes recognize the condition of things which compels the conclusions and suggestions herein made, and are willing to co-operate cheerfully in the measures set on foot in their behalf.

With judicious management and a careful observance of treaty stipulations, I doubt not that the plan of gathering all the tribes into a smaller area can be successfully accomplished.

The foregoing facts induce me to regard it as of the utmost importance to the success of the existing policy that the Indian Territory be organized under a territorial government, with such restrictions and regulations as will secure the rights of the Indians in the soil, encourage them in their efforts to improve their mental, moral, and industrial condition, while, at the same time, maintaining a general supervisory control of their legislation as in the case of any other Territory.

The bill introduced at the third session of the Forty-first Congress for the organization of that Territory under the name of Oklahoma, and the Ocmulgee constitution adopted by a council of the Indian nations of the Territory in December last, are intended to accomplish the object referred to. Those instruments seem to be so carefully guarded as to secure the end desired, and will fully protect the Indian from imposition and injustice until he shall have made such progress as to enable him to protect himself.

As has been shown, the Indian Territory is of sufficient area to locate all the Indians, and give each man, woman, and child among them 180 acres of land. With such an ingathering of the now widely scattered tribes, under an efficient territorial government, and with the nucleus of partially civilized nations and tribes already there, the entire race would be so well in hand and surrounded by such influences as to be more easily managed, thus enabling the Government to work out its humane policy toward them to its legitimate results. If it shall be deemed impracticable to bring all the Indian tribes into the Indian Territory, under an organized territorial government, I am satisfied that the good results that will accrue to those who conclude to settle in that Territory, under such a government as I have indicated, will demonstrate the necessity and propriety of locating the remaining Indians under a like territorial government, to be organized in some other place, and embracing such limits and having such location as time, experience, and subsequent information shall indicate as best adapted to the accomplishment of the great object which all good men so earnestly desire.



Such an organization would have a tendency to obliterate many of the existing obstacles to Indian civilization. The traditional feuds which now keep tribes in a state of continual warfare, compelling them to live in camps for protection, would be speedily crushed out by a strong home government. The custom of holding all property in common, which is always a tax upon industry, and a premium upon indolence and unthrift, would be abolished. Frequent changes of reservations, the source of so many of our troubles with that race in the past, would cease. The rewards of industry would be so liberal as to obliterate their long-standing prejudice against labor, while the lack of opportunity to engage in the chase, or in hostile raids, would soon do away with the desire to engage in those diversions, and those who were not convinced of the propriety of industry would soon be compelled to recognize its necessity.

We must not expect too great results from the immediate operation of the new policy. We cannot hope to make intelligent, law-abiding citizens of a race of unlettered barbarians in a day, in a year, or a decade. Time is required to change those habits which are firmly fixed by immemorial custom. Nor can we hope to mature a perfect system by a single act of Congress. We can only shape a policy, and arrange its details gradually, as experience dictates, after a careful observance of the results of measures already in operation.

Few of those now actively engaged in promoting the existing policy may live to see its full fruition, and it may never succeed, but no candid philanthropic man will deny that the policy seems to be right and proper under all the existing circumstances. A Christian Government like ours owes it to her own good name, to civilization and Christianity, to use every effort for the elevation of a race which has been placed under her guardianship. Should it fail, I trust it may not be through any want of fidelity on the part of any of those now engaged in its execution. The path of duty seems clearly marked; it is ours to follow it.

During the year a number of citizens of the United States moved upon the lands of the Indian Territory adjacent to the Kansas boundary, evidently for the purpose of effecting a permanent settlement thereon. They erected improvements and began to till the soil. These trespasses gave great uneasiness to the owners of the lands, who naturally inferred that they were but the beginning of an organized movement to deprive them of their territory. Upon being informed of this condition of things, I issued a proclamation to the trespassers, ordering them to withdraw at once from the Territory, and notifying them that unless they did so promptly, force would be used to secure their removal. This step seems to have been generally effective, and but few of the trespassers remain. Trespasses of another character are still being made, however, upon these lands, by citizens of Kansas, and much valuable timber is being cut down and carried away. The effort of the Department will be to prevent these spoliations in the future, as they do much

to render the Indians uneasy as to the tenure of their lands, and the good faith of the Government towards them is seriously doubted, thus tending to retard the working out of the general policy.

The railroads authorized to be built through the Indian Territory by the eleventh article of the treaty of 1866 are in process of construction—the Missouri, Kansas, and Texas Railroad from north to south, and the Atlantic and Pacific road from east to west. The grant to those companies from the Indians was simply the right of way, and 200 feet of land in width for the occupancy of the road. The companies are anxious for an enlarged grant of lands, and that the lands lying adjacent to their roads, which are probably the most valuable in the Territory, should be open to general settlement. This is a question requiring the careful attention of Congress, and should be treated with a full consideration of the rights of the Indians, as guaranteed by existing treaties, and in connection with the general policy of the Government, not only to deal justly with them, but to secure, as far as possible, their education, civilization, and general prosperity.

At the request of the Cherokee delegation, and for the purpose of carrying out the provision of the treaty of 1866, ceding lands west of the ninety-sixth meridian, west longitude, to the Government for the purpose of locating friendly Indians thereon, a survey was ordered to establish that meridian. That survey is now in progress, and it locates the meridian about three miles west of its supposed former location. This change of that line has necessarily changed the boundaries of some of the reservations, and the tribes prejudiced thereby are greatly disturbed in consequence.

In the case of the Osage reservation, lying immediately west of the ninety-sixth meridian, and fourteen miles in width, the change of line cuts off all the rich lands lying in the valley of the Little Verdigris, or Big Caney River, and deprives that tribe of nearly all the valuable grazing and farming land in their supposed reservation.

The Seminoles have also entered complaints, showing a similar state of affairs with regard to their reservation, and doubtless other tribes will do the same.

When the report of the survey is received at the Department I will cause it to be carefully examined, and if any ground exists for supposing it to be erroneous, I will refer the whole subject to the President, and request that the attention of Congress be called to it. Should the survey prove correct, it will so materially disturb the equitable rights of several tribes of Indians as to demand, not only the serious consideration of this Department, but probably the attention of Congress.

The massacre at Camp Grant, in Arizona, and other occurrences preceding and subsequent to that affair in that Territory, have combined to produce a general feeling of hostility between the Apaches and the white settlers.

It was represented to the Department during the past summer that

Cochise, the Apache chief, was at last willing to cease his depredations, and would use his influence with his people to bring them upon a reservation, if they could be protected in going to such reservation, or while remaining thereon. To afford him an opportunity to manifest his good faith in making such offers, Hon. Vincent Colyer, Secretary of the board of Indian commissioners, was directed to visit the Territory of Arizona, and to offer Cochise the protection of the Government, while he should endeavor to bring his people upon a reservation.

Mr. Colyer set aside three temporary reservations for the purpose designated, and made encouraging progress toward inducing the Indians to enter upon them. Instructions have been given the military authorities to co-operate with the officers of the Indian Bureau, and to advise the Apaches that if they will enter upon the reservation provided for them, in good faith, and live thereon peaceably, they will receive the aid and protection of the Government, but if they do not do so, and evince any disposition to renew their depredations, they will be promptly punished. The Indian agents have also been instructed to acquaint the Indians with the designs of the Government concerning them. It is sincerely hoped that these efforts will prove successful in the early accomplishment of the purpose designed. It is a subject of profound regret that so great misunderstanding of the temper and disposition of the Indians in Arizona should exist, and it is hoped that both the Indians and the white settlers will so act in future as to give no ground for complaint.

Efforts are now being made to remove the Flatheads and Pend d'Oreilles from their location in the Bitter Root Valley, Montana, to the general reservation at Jocko Lake. Under the terms of the treaty of 1855, the President has declared it unnecessary to set aside any portion of that valley for a reservation, and has ordered the removal of the Indians now residing there to the general reservation at Jocko Lake, after paying them for their improvements, but allowing any Indians who may so desire to remain and become citizens, granting them all the privileges of citizens under the homestead and pre-emption laws. This plan will, when perfected, open up the valuable lands in the Bitter Root Valley to white settlement, and it will doubtless be speedily settled up.

The attention of Congress has been heretofore invited to the fact that some portions of certain reservations which contain more land than the Indians need should, with their consent, be sold at their fair market value, and the proceeds applied to improvements, such as building houses, fencing and breaking land, the purchase of implements and stock, and the establishment of industrial and other schools. The details of this subject will be found in the report of Superintendent Janney, and show that the Omahas, whose reservation contains 205,000 acres, have, by petition, expressed a wish to sell from the most western portion of their reservation 50,000 acres, as near as can be separate

from the remaining part of their lands by a line running along the section lines from north to south.

The Ottoes and Missourias, whose reservation contains 160,000 acres, have expressed a desire to sell about 80,000 acres, being the western half of the reservation, and lying wholly west of the Big Blue River, partly in Nebraska and partly in Kansas.

The Pawnees, whose reservation contains 288,000 acres, would sell about 50,000 acres, but the location of the part to be disposed of has not yet been determined.

I expect to submit a special report concerning these lands, together with a bill providing for a sale of such portions of said reservations as may be designated.

Mr. Janney recommends that there be established a sufficient number of day-schools for all the children between the ages of 6 and 12 years, and a manual-labor boarding-school at such reservation, in which I cordially concur.

In accordance with my request, Hon. Felix R. Brunot, President of the Board of Indian Commissioners, was present at the council of the Indian tribes occupying the Umatilla reservation in Oregon. That council was for the purpose of ascertaining the feelings and desires of those tribes relative to removing from said reservation upon the payment to them of certain specified annuities. The result of the council was the refusal of the Indians to leave their reservations.

Mr. Brunot's report fully details the proceedings of the council, and the propositions of the special commissioners, which the Indians declined to accept, and will be found with the report of the Office of Indian Affairs.

#### PUBLIC LANDS.

From the report of the Commissioner of the General Land Office, it appears that during the fiscal year ending June 30, 1871, the transactions of that branch of the public service were as follows:

	Acres.
Disposal of public lands for cash .....	1, 389, 982.7
By military bounty-land warrant locations under acts of 1847, 1850, 1852, and 1855 .....	525, 991.4
By homestead entries under act of 1862 and amendments .....	4, 600, 326.2
By agricultural college scrip locations .....	494, 446.2
By approvals to railroads .....	2, 911, 938.3
By approvals to wagon-roads .....	239, 168.7
By approvals to States as swamp lands and swamp-land indemnity ....	428, 587.0
By Chippewa and Sioux Indian scrip locations .....	16, 513.0
Making a total of .....	<u>10, 606, 722.0</u>

This statement shows an increased disposal, as compared with the preceding year, of 2,511,379.03 acres.

The cash receipts during the past fiscal year, under various heads, including fees to local officers, &c., amount to \$2,929,284 70.

The public surveys have been extended during said year over 22,016,608 acres, which, with the area already surveyed, make an aggregate of 550,879,069 acres, leaving an estimated area yet to be surveyed equal to 1,284,119,331 acres. In addition to this, the eastern boundary line of Nevada has been completed and verified in the field by astronomical observations and determinations, and a contract has since been entered into for the survey of the Utah-Idaho boundary line, which survey is now being prosecuted.

The estimates submitted by the Commissioner for the astronomical surveys of boundaries between certain States and Territories are recommended to the favorable consideration of Congress, in view of their importance as controlling questions of jurisdiction and title.

The Commissioner's report contains a very full synopsis of the laws governing the adjustment of private land-claims in California.

Special attention is invited to that part of the report relating to private land-claims in the Territories of New Mexico, Arizona, and Colorado, setting forth the necessity for further legislation in regard to such claims.

The increased value of lands in these Territories, consequent upon the extension of railroads, is rapidly attracting settlers, and it is a matter of the greatest importance to their future prosperity that the private lands should be separated from the public domain at the earliest possible period, to accomplish which result existing legislation is inadequate.

I join in the recommendation made by the Commissioner for the appointment of a commission similar to that created by the act of 3d March, 1857, for the adjustment of titles of the same kind in California, and for the enactment of a statute explanatory of the intent of Congress, as to whether the provisions of the second section of the act of March 3, 1869, (United States Statutes, vol. 15, page 342,) relating to the issuing of patents, applies only to claims confirmed by said act, or also to claims the titles to which were confirmed by previous acts, but which contained no provision for the issuing of patents.

The Commissioner, treating upon the operations of the pre-emption privilege, and the complications constantly arising under the same, thinks it questionable whether the pre-emption law, as now administered, is any longer a necessity to our public-land system, regarding the provisions of the homestead act sufficient at the date of its passage for a measure of complete substitution for the pre-emption laws, if we except the omission of the single feature of priority of settlement, which was not recognized under the pre-emption laws. I coincide with the views entertained by the Commissioner, that a complete unification of the law of settlement-rights is now not only desirable, but easily attainable, and recognizing the fact that some action should be taken to secure this; I therefore endorse the recommendation for further legis-

lation suggested by the Commissioner for the reasons detailed in his report.

Under the homestead law the necessity for additional legislation to meet special cases not contemplated or foreseen by the original framers of the law has become apparent, and when called to the attention of Congress will, I trust, receive such favorable action as will adequately meet the cases referred to.

It is also suggested, and the suggestion has my approval, that agricultural college scrip be by legislation assimilated to military land-warrants, to the extent that the same may be receivable in commutation of homestead entries. I also fully concur in that part of the report relating to homesteads which recommends that credit be given to soldiers in the late war for the full term of service rendered by them in the war, and that the same may be deducted from the term of years required by law to perfect a homestead.

In view of the reasons given by the Commissioner, I would also recommend the confirmation of all entries regularly made under the graduation acts of August 4, 1854, (now repealed,) so far as the land may be shown to have been actually settled upon or substantially improved by the original purchasers, or their assignees, to the end that this class of anomalous entries may be finally disposed of.

The operations under the mining statute of 1866 and subsequent amendments have shown a steady increase in the work of this important branch of the service. Owing, however, in a great measure, to the difficulties which are encountered in properly notifying the parties interested in any mine for which an application for patent has been made, the work has been somewhat retarded. I therefore concur in the recommendation of the Commissioner that, in order to properly notify all parties whose interests may be affected by an application for the exact ground sought to be patented, a survey of the claim should be first made, and the required notice be thereafter given for the period prescribed by law, and that at the expiration of said time no further adverse filing be received.

In the matter of the increase of compensation to the employés of the General Land Office, the suggestions of the Commissioner are well worthy the consideration of the legislative branch of the Government, with whom the remedy for the evils enumerated by him lies. The appeal is based, not upon the deserving merits of industrious clerks—which, aside from other considerations, would justify Congress in providing for their sufficient pay—but upon the absolute necessities of the Bureau, in safely and correctly administering the laws relating to the disposal of the public lands, and in perfecting titles to the homes of thousands of worthy citizens. Equally important is the request for authority to appoint special agents, at fixed compensation, to investigate charges against district land officers, and to assist in the opening of new offices. Believing, as I do, that those recommendations, if acceded to, will, in the

end, prove to be measures of actual economy, beside securing a more efficient execution of the important work of that Bureau, I have no hesitation in giving them my hearty approval.

The Bureau, under the control of the present Commissioner, has been improved in many important features, tending to insure greater efficiency in the discharge of its important and delicate trusts, and the general administration of the affairs of the Bureau has been entirely satisfactory.

#### PATENTS.

There were filed in the Patent Office during the year ending September 30, 1871, 19,429 applications for patents, including reissues and designs; 3,337 caveats; and 181 applications for the extension of patents. Twelve thousand nine hundred and fifty patents, including reissues and designs, were issued, and 147 extended; 514 applications for trade-marks were received, and 452 trade-marks issued. The fees received during said year amount to \$671,583 81, and the expenditures for the same period were \$560,041 67, leaving a surplus of \$111,542 14 of receipts over expenditures. The appropriation asked for the next fiscal year is \$606,400.

The number of applications for patents, including re-issues and designs, received during said year, is a small increase over the number received the preceding year, while the number of patents issued is not quite so great. It is worthy of remark, however, that the labors of the clerical force of the office are increased proportionally more than the number of applications would seem to indicate, inasmuch as each year's operations add about twenty thousand to the number of patented and rejected applications, with which the examining corps must become familiar, in addition to those previously filed. The examiners are, generally, men of distinguished ability and untiring industry, but their number is inadequate to properly and promptly discharge the increasing duties demanded of them.

The act of January 11, 1871, abolished the old form of annual report of the Patent Office, and authorizes the Commissioner to substitute therefor full copies of the specifications and drawings of all patents issued, these to be deposited in the clerk's office of each United States district court, and in certain libraries. This law was passed in the belief that there was very little public demand for, or interest in, the annual reports of the Patent Office, which belief the Commissioner thinks was not well founded, although approving of the law, and regarding it as a means of placing fuller information before those interested, and at a much less cost than before. Beside copies of the specifications and drawings for disposition under the law, other copies are printed for subscribers. These publications are rapidly becoming popular among those interested in patents, and will be of great benefit to the office in various ways. For the convenience of subscribers, the publication of the specifications and drawings has been arranged into one hundred and seventy-six dif-

ferent classes, according to their subject matter, so that subscribers need not necessarily pay for the entire issue, but only for the particular class or classes in which they may be interested.

The rapidly extending business of the office requires more room, and although additional room has been provided during the year by the transfer of the Pension Office clerks to another building, the Patent Office is still without sufficient room for the transaction of its business in a satisfactory manner.

The general business of the office has been promptly and satisfactorily administered during the term of the present Commissioner, and his efficiency and capability for its delicate duties is cheerfully attested.

#### PENSIONS.

There are at the present time on the pension rolls the names of 634 widows of soldiers in the Revolutionary War, a decrease of 93 since the last annual report. 49 were married prior to January 1, 1800, and 55 were married subsequent to that date.

There are on the rolls the names of 1,214 widows and children of soldiers who served in the wars subsequent to the revolution and prior to that of the rebellion, being 72 less than the preceding year.

- During the past fiscal year there were examined and allowed 7,807 original applications for invalid pensions of soldiers, at an annual aggregate rate of \$491,905 80, and 3,379 applications for increased pension of invalid soldiers, at an aggregate yearly rate of \$170,522 80. During the same period 8,282 original pensions to widows, orphans, and dependent relatives of soldiers were allowed, at an aggregate annual rate of \$1,116,156, and 1,816 applications of the same class for increase of pension were also admitted, at a total annual rate of \$58,212 14. The number of claims, original and increase, admitted during the year was 21,284, and the annual amount of pensions thus granted was \$1,836,796 74. On the 30th day of June, 1871, there were on the rolls 91,290 invalid military pensioners, whose pensions annually aggregated \$8,141,734 85, and 112,428 widows, orphans, and dependent relatives of soldiers, whose yearly pensions amounted to \$14,212,551 19, making an aggregate of 203,718 Army pensioners, at a total annual rate of \$22,354,287 04. The whole amount paid during the last fiscal year to invalid military pensioners was \$12,304,520 37, and to widows, orphans, and dependent relatives, \$20,188,409 70, making a grand total of \$32,492,930 07, which includes the expenses of disbursement.

Since the passage of the act of February 14, 1871, granting pension to the soldiers of the war of 1812, and to their widows, 727 claims for pension thereunder have been allowed, at a total annual rate of \$67,792. There has been paid during the last fiscal year to pensioners of this class \$3,066 05. During the same year there were admitted 127 new applications for invalid Navy pensions, at an annual rate of \$11,804; 67 applications of the same class for increased pensions,



at an annual aggregate rate of \$2,995; 117 original applications of widows, orphans, and dependent relatives of those who died in the Navy, at an aggregate rate of \$17,394; and 7 pensions of the same class were increased at a total yearly rate of \$282. At the close of the last fiscal year there were borne on the rolls of Navy pensioners 1,377 invalids, at an annual aggregate of \$125,233 25, and 1,673 widows, orphans, and dependent relatives, at an aggregate annual rate of \$257,682, making the number of such pensioners 3,050, at a total annual rate of \$382,915 25. The total amount paid during the said year to Navy invalids was \$190,045 52, and to widows, orphans, and dependent relatives, \$391,342 09; a total amount of \$581,387 61.

The number of pensions, of all classes, granted during the past fiscal year was 17,060. During the same period there were dropped from the pension rolls, from various causes, 8,251, leaving a grand total of 207,495 pensioners on the rolls June 30, 1871, at an aggregate annual rate of \$22,804, 994 29. The amount paid during said year for pensions of all classes, including the expenses of disbursements, was \$33,077,383 63, being \$5,296,571 82 in excess of the amount paid during the preceding year. This excess is chiefly owing to the operation of the act of July 8, 1870, making pensions payable quarterly, whereby the whole amount of pensions accruing between March 4, 1870, and June 4, 1871, became due and payable within the fiscal year just closed.

There were 2,598 bounty-land warrants issued during the year, for 406,160 acres, an excess of 840 over the number issued the preceding year.

Eight thousand nine hundred and eighteen persons availed themselves, during the year, of the benefits of the act of June 30, 1870; providing for artificial limbs and apparatus for resection, or commutation therefor, of whom 7,707 preferred the latter.

There are now on file, unadjusted, 33,182 claims for invalid pension, and 35,597 claims of widows, orphans, and dependent relatives, a total of 68,779 claims. On the 13th ultimo 24,844 claims for pension of survivors of the war of 1812 had been received, and 7,101 claims of widows or such soldiers, making a total of 31,945 applications of this class, 7,871 of which have been disposed of. The Commissioner estimates the number of those now living who are entitled to the benefits of said act to be 32,444; their average age seventy-nine years; their average duration of life less than six years; and the amount that will be required to pay, during the life of the pensioner, all pensions granted by said act, \$18,095,855 44.

The act of July 14, 1862, and the acts supplementary thereto, make no provision for pension to the following officers in the naval service, their ranks having been created by acts passed subsequently to that of 1862, viz: Admiral, Vice-Admiral, rear-admiral, commodore, ensign, and secretary to Admiral and Vice-Admiral. I recommend that the right of these officers, their widows, orphans, and dependent relatives be recognized by statutory provision.

The Commissioner, in his report, furnishes much interesting information relative to the various diseases and injuries, on account of which so much of the bounty of the Government is dispensed.

The time for the biennial examination of invalid pensioners required by the act of March 3, 1859, occurred on the 4th day of September last, but the results thereof are not apparent, as the returns of the medical officers have not yet been received. The sound policy of such examinations is fully established by the experience of the office, and it is believed that the aggregate results of the recent examinations will exhibit a considerable reduction in the number of invalid pensioners.

Especial attention has been given to the investigation of frauds. Through the instrumentality of special agents, 301 persons have been dropped from the rolls during the year, and the cases of a greater number are under investigation. Thirty indictments have been found against dishonest attorneys or agents, of whom nine have been convicted, five are fugitives from justice, and the cases of sixteen were pending at the date of the Commissioner's report.

It is estimated that \$30,480,000 will be required for the pension service for the next fiscal year.

Owing to the requirements of the Patent Office for more room for offices, it became necessary, during the year, to vacate those rooms in the Patent Office building occupied by the Pension Bureau. To accommodate the latter Bureau, and at the same time to consolidate it into one building, I leased the Seaton House, in this city, for the term of five years, at an annual rental of \$10,000. That house was believed to be large enough to accommodate the entire Pension Bureau, and enabled us to vacate several outlying buildings, which have been heretofore occupied by said Bureau, and, at the same time, to save some \$5,000 per annum in rent.

The policy of renting private buildings for office uses, and of keeping valuable public records in structures liable to destruction by fire can only be excused on the ground of necessity. The Seaton House is as safe from any danger of loss by fire as the buildings which were vacated when it was leased, but it is not fire-proof, nor can any fire-proof buildings be obtained in the city.

A due regard for the safety of the public records would dictate the pressing need for the construction of suitable buildings for the comfortable and safe occupancy of the Bureaus. I therefore renew the recommendation made by several of my predecessors, that early action be taken by Congress looking to the erection of a suitable building for this Department.

#### OFFICE OF EDUCATION.

The report of the Commissioner of Education exhibits, in fullest detail, the interesting and important results he has achieved, although the clerical force at his command would seem to be inadequate to the proper

discharge of the duties with which the Bureau is charged. The details of the report will show the vast amount of work which the Commissioner has performed, and I take pleasure in attesting the ability, fidelity, and energy with which he has administered the affairs of his office.

It has been the design of the Commissioner to establish and maintain an intimate and constant communication with the various educational centres of the country; to seek and to supply information; to distribute documents, and to pursue original investigations. In the course of official duties the Bureau of Education has received and sent out about 2,000 written communications, has distributed about 12,000 printed documents, and has received many valuable accessions to its library. This sort of interchange is constantly and steadily increasing, and is already greater than the limited clerical force of the office can properly attend to, thus leaving very little opportunity for original investigation in its many interesting directions.

Among the workings of the Bureau may be noted:

First. The inauguration of a system of direct exchange of documents and information with foreign ministers of public instruction.

Second. Visits by the Commissioner to the whole educational field in this country, especially in the South and on the Pacific Coast, for the purpose of personally acquainting himself with prominent educators, and the demands of the work to be done.

Third. A great variety of original investigation, respecting orphanage, pauperism, crime, insanity, &c., in their relations to education.

Fourth. The papers accompanying the report of the Commissioner comprise an abstract of State and city reports for the whole Union; a *résumé* of the progress of education in Europe, Asia, and Africa; a great number of statistical tables respecting public systems of States and cities, colleges, professional schools, and other institutions, and original articles on various educational subjects by universally acknowledged authorities.

#### CENSUS.

Attention is invited to the report of the Superintendent of Census. The enumeration of inhabitants at the Ninth Census, as well as the collection of social and industrial statistics, which, under the American system, is made a part of the census, has been completed since the last annual report of the Department; and the compilation of the statistical tables usually published in that connection, as well as of many others, which appear to be equally desirable, has been well advanced. Appreciating the importance of giving the results of the census to the country at the earliest possible date, I have fully met the views of the Superintendent in respect to the amount of clerical force to be employed. Three-fourths, in bulk, of the statistical tables which it is proposed to embody in the three volumes of the census authorized by resolution of Congress have already been sent to press, somewhat over 1,000 pages being already in type. The compilation of the remaining tables has been begun, and

the completion of the work upon the three quarto volumes will be accomplished during the winter. I would recommend that authority be given for the preparation and publication of an octavo volume, which shall contain the most important results of the census, within each department of inquiry, in a form convenient for popular use; and that of this volume a large edition be issued, of which 2,000 copies at least shall be by law reserved, not to be distributed until the occurrence of the next decennial enumeration.

I would particularly ask attention to the facts and considerations presented by the Superintendent, which appear to require extensive and radical changes in the census law.

The act of May 23, 1850, was, of necessity, in most of its parts, a tentative measure. Even were the conditions of the country and the requirements of statistical science substantially the same at the present time as at the date of that enactment, it would be unreasonable to assume that the experience of three censuses taken under that law had not shown occasion for many and important changes, both in the machinery of the census and in its schedules. But in the twenty-one years that have elapsed since the enactment of the census law of 1850, the occupations of the people have become so greatly diversified that the present industrial schedules fail to reach some of the most vital interests of the country, and are plainly insufficient adequately to represent many of those which they assume to embrace. Within the same period, the area over which the agencies of the census are to be extended has been practically trebled, and has been made to include vast territories under conditions of settlement and of industry such as did not require to be provided for when the present law was enacted. By the creation of the system of internal revenue, and the enactment of the election law, the officers to whom the act of 1850 commits the supervision of the census work have been charged with duties so numerous and engrossing as to render it impossible for them to give to the census the time and attention absolutely necessary to its proper completion. Moreover, the whole scale of prices and of wages throughout the country has been so advanced as to render the rates of compensation, both for marshals and assistant marshals, as fixed by the act of 1850, generally inadequate; while, yet, the experience of the recent census has shown that this defect is neither to be justly nor economically remedied by any provision for a uniform per centum increase of compensation, but only by a thorough readjustment of the entire scheme. In the field of social investigation, again opened up by the act of 1850, the experience of the last year has shown that the schedules propose many inquiries for which the country is not yet prepared, and at the same time omit to notice many subjects appropriate to the census, in respect to which information is urgently required, in the interest alike of science and of good legislation. The last and most impressive reason I have to present for a general revision of the census law is that the act of 1850, while charging import-

ent and critical duties upon this Department, fails to commit to it that control over its immediate agents in the census which is recognized in every other service known to the law as essential to the satisfactory performance of duty, and even to official responsibility for results.

By the law of May 23, 1850, it is made the duty of the Secretary of the Interior, on the completion of each decennial enumeration of the population of the United States, to apportion the representation in Congress among the several States. This duty will be performed about the first of January next, in accordance with the provisions of said law, unless Congress shall in the meantime direct that a change shall be made in the existing law governing the subject.

The general plan of the report of the Ninth Census, as shown by those portions of it which are already in print, exhibits many interesting and valuable improvements in classification and arrangement over any preceding report, and the condition of the general work of the Census Bureau is so well advanced that the full reports of the census will be given to the public at a much earlier day than ever before.

The Department acknowledges the valuable services of General Walker, the Superintendent of the Bureau, whose thorough practical knowledge of the science of statistics has enabled him to effect such valuable improvements as cannot fail to be recognized by the public when the reports are issued.

#### GEOLOGICAL SURVEY.

In accordance with the act of the third session of the Forty-first Congress making appropriations for the continuation of the geological survey of the Territories of the United States, under the direction of this Department, Professor Hayden was appointed chief geologist. He was instructed to direct his attention to the little-known but interesting region about the source of the Yellowstone and Missouri Rivers. He took as his initial point Ogden, Utah, and examined a belt of country northward to Fort Ellis, Montana; then proceeded up the valley of the Yellowstone, explored the wonderful ranges of mountains, cañons, falls, hot-springs, geysers, &c., connected with that remarkable region. A careful topographical and pictorial chart, with soundings of the lake which forms the sources of the Yellowstone, was made. Numerous maps, charts, sketches, photographs, &c., of the entire route explored were obtained, and are now in the possession of this Department. The geologist was also instructed to direct his attention to the economical resources of the public domain, and thus a great amount of valuable notes and specimens, illustrating the agricultural, mineral, zoological, and botanical wealth of the West, was secured.

The results of this expedition show it to have been a complete success, and it is the opinion of this Department that they fully justify the liberal provision made by Congress for it. A preliminary report of the results will be presented to Congress at an early date.

To reap fully all the advantages from this survey, it is important that every facility be afforded Professor Hayden in the preparation of his reports, maps, and charts in their publication in a style in some degree commensurate with the great value of the explorations to the country and to the scientific world.

I would also recommend the continuation of the system of geological explorations so auspiciously prosecuted thus far under the direction of Professor Hayden, that all our public domain yet unknown may be brought to the attention of the country.

#### RAILWAYS.

The subscriptions to the stock of the Union Pacific Railroad Company amount to \$36,783,000, of which \$36,762,300 has been paid. The receipts from the transportation of passengers, freight, and miscellaneous sources, for the year ending June 30, 1871, were \$7,362,015 19. The entire cost of the road to said date (unadjusted balances with contractors not included) was, including fixtures, \$112,793,618 29. The indebtedness of the company amounted, at the time above mentioned, to \$74,653,512, of which \$27,236,512 is due to the United States.

Stock of the Central Pacific Railroad Company to the amount of \$59,644,000 has been subscribed, and \$54,283,190 paid. The receipts from transportation of passengers and freight for the year ending 30th June, 1871, were \$7,326,327 36, and the expenses \$3,745,766 24, leaving net earnings to the amount of \$3,580,560 12. At the close of said year the indebtedness of the company amounted to \$71,430,751 88, of which \$27,851,000 was to the United States. The act of Congress approved 6th May, 1870, (16th Statutes, 121,) provided for fixing the point of junction of the Union and Central Pacific Railroads within the limits of certain sections of land therein specified. On the 7th September, 1871, the Department received certified copies of resolutions passed by the companies, (that of the Union company on the 12th July, 1870, and that of the Central June 21, 1870,) fixing, in compliance with the law, "the common terminus and point of junction of said railroads at a point on the line of said roads 1,038.68 miles west from the initial point of the Union Pacific Railroad, near Omaha, the same being five miles west of Ogden and five miles west of the crossing of the Utah Central Railroad, on section 1 in township 6 north, of range 2 west, of the principal meridian and base-line of the Territory of Utah." The Western Pacific, the California and Oregon, the San Francisco and Oakland, and the San Francisco and Alameda Railroad Companies have been consolidated with the Central Pacific, as shown by its last annual report.

The stock subscription of the Central Branch Union Pacific Railway is \$1,000,000, of which \$980,600 has been paid. The receipts for transportation of passengers for the year ending June 30, 1871, were \$67,971 66, and for freight \$137,625 78. The expenses on account of the road and fixtures have been \$3,723,700, and the indebtedness of the

company (exclusive of first-mortgage bonds, \$1,600,000, and the Government loan, \$1,600,000) is \$205,076 75. On the 27th ultimo the Department received a map of the continuation of the road from Fort Riley to a junction with the Union Pacific Railroad at the one hundredth meridian of longitude west from Greenwich. On the 30th of that month this office transmitted said map to you for approval.

Stock of the Kansas Pacific Railway Company to the amount of \$8,972,500 has been subscribed and paid in. The receipts for the transportation of passengers, freight, &c., for the year ending June 30, 1871, were \$3,146,661 82. The cost of construction and equipment of six hundred and thirty-nine miles of main line and thirty-three miles of branch line is \$29,517,999 75. The road extends from the mouth of the Kansas River to Denver, Colorado, a distance of six hundred and thirty-nine miles. It was regularly opened for business on the 1st September, 1870, and since that date has been in operation, in connection with the Denver Pacific Railroad, (one hundred and six miles,) to Cheyenne, Wyoming, on the Union Pacific Railroad. The total funded debt is \$26,061,100, and the other liabilities and indebtedness amount to \$3,133,504 89, making a total debt of \$29,194,604 89, of which \$6,303,600 is due to the United States.

The amount of stock of the Sioux City and Pacific Railroad Company subscribed is \$4,478,500, of which \$1,791,400 has been paid. The receipts from the transportation of passengers, freight, &c., for the year ending June 30, 1871, were \$313,259 55, and the expenses during that period were \$216,807 34, the net earnings being \$96,452 21. The cost of the road and fixtures is \$4,650,000, and the indebtedness of the company is \$5,323,920. The line of this road commences at Sioux City, Iowa, and runs thence, by the most direct and practicable route, to a connection with the Union Pacific Railroad, at Fremont, about 48 miles west of Omaha, Nebraska. The entire length of the main line, as per map filed in this office, is 101.77 miles, besides extra tracks on each side of the Missouri River, and many miles of side-tracks; all of which, with the telegraph line, is now completed, equipped, and in successful operation. This company also owns a branch-road from Blair to De Soto, in Nebraska, about four and a half miles long, which was a portion of the Northern Nebraska Air Line, and was obtained through the consolidation of the two roads. The company have recently purchased of the Cedar Rapids & Missouri River Railroad Company the short line of road, heretofore operated by the latter corporation, between Missouri Valley and California Junction, which has proved indispensable, as affording direct communication between this road and Chicago, and also by way of Council Bluffs, with St. Louis, &c., together with the valuable depot-grounds, side-tracks, and all other improvements and buildings. The Fremont, Elkhorn, & Missouri Valley Railroad, commencing at Fremont, where it connects with this company's line, and also with the Union Pacific Railroad, has been extended to Wisner, about 200 miles.

miles northwest of Fremont, and is now operated by said Sioux City & Pacific Railroad Company. This line was designed to open Northern Nebraska and create business for the last-named company, the intention being to consolidate the two lines by lease or otherwise.

At the close of the last fiscal year, June 30, 1871, the amount of subscribed stock of the Southern Pacific Railroad Company was \$5,224,000, and the amount actually paid in, \$1,994,800. Since the date of the last annual report of the company, two hundred and eighty miles have been surveyed and explored. Of this distance, nearly all the work has been on that portion of the line from Gilroy through the different passes over the Mount Diablo Range to the San Joaquin Valley. The cost of the surveys has been \$30,090 52. The amount received for the transportation of passengers is \$256,410 13, and that received for the transportation of freight is \$144,444 48. The expenses on account of the road and fixtures are \$222,427 06. The principal of the company's indebtedness on account of their bonds issued is \$480,000, and on account of the assumption of the bonded indebtedness of the San Francisco and San José Railroad Company, \$740,000, possession having been taken of the latter company's road, &c., on the 13th of October, 1870. 50.26 miles of the Southern Pacific Railroad and telegraph line have been completed and accepted by you.

The second, third, and fourth sections, of twenty miles each, of the Oregon & California Railroad, were accepted by you on the 28th February last. This portion, with the section previously accepted, makes a length of line already reported upon and accepted of eighty miles, running from East Portland, Multnomah County, Oregon, to about half a mile beyond the station of the city of Albany.

Stock of the Northern Pacific Railroad Company to the amount of \$100,000,000 has been subscribed, of which \$2,241,600 has been paid. The expenses of the company to June 30, 1871, were as follows: Surveys, \$479,603 11; construction, \$4,065,315 45; rolling-stock, \$289,634; general expenses, \$112,318 83; total, \$4,936,871 39. The indebtedness of the company to that date is as follows: First-mortgage bonds issued, \$7,441,900; bills payable for material *in transitu*, &c., \$1,465,116 87; due contractors, \$178,746 84; total, \$9,085,763 71. A map of the Minnesota division, filed in this Department on the 18th instant, shows the line so far as then located and completed, beginning at its junction with the Lake Superior & Mississippi road, near the Dalles of the St. Louis River, in Carlton County; thence running in a nearly westward course to Sandy River; thence in a general southwesterly direction to the crossing of the Mississippi River, at Brainard, in Crow Wing County; thence in a nearly westward course to the crossing of Crow Wing River; thence in a general northwesterly course to the crossing of the Buffalo River, in Clay County; and thence in a nearly westerly course to the Red River, a few miles from Georgetown, Minnesota; a distance of 228.2 miles. Three lines have been surveyed in



Dakota. The one extending from the point where the forty-seventh parallel of latitude crosses the Red River, and thence in a general westerly direction to the mouth of Heart River, Dakota, has been adopted as the line of location, and has been put under contract. The work on it is being vigorously prosecuted, the contractors binding themselves to have the line completed to the Missouri by the 1st of July next. A preliminary line has also been run from the mouth of Heart River, in a nearly westerly direction, to the Yellowstone, and from this latter point to Bozeman's Pass; and from thence several lines have been run, testing the various passes of the Rocky Mountains, through to the Columbia River. On the Pacific coast lines have been run testing all the passes through the Cascade Range between the Columbia River and the boundary line. The line from Portland to Puget's Sound has been located, following the valley of the Columbia River from Portland to Kalama, crossing the river at that point; thence following the valley of the Cowlitz River to the mouth of the Skookumchuck River, Washington Territory; from thence several lines have been surveyed, extending on both the eastern and western sides of the sound. Upon the lines, as located, the work of construction has been commenced, and twenty-five miles will be completed and in operation by the 1st of January next, as required by the company's charter.

You accepted on 3d of January the completed portion of the California & Oregon Railroad, 77.6 miles, commencing at Roseville, Placer County, California, where said road connects with the Central Pacific Railroad, and thence running northerly through the city of Marysville to a point at or near the town of Chico, Butte County, California.

The initial point of the Atlantic & Pacific Railroad is near the town of Springfield, Missouri, "upon the west line of the northeast quarter of the southeast quarter of section 12, township 29, range 22 west." As was stated in the last annual report of this Department, work on this road was commenced on the 4th of July, 1868, and fifty miles were completed, equipped, and opened for business on the 13th day of June, 1870. You have accepted said fifty miles, and also an additional section of twenty-five miles reported on since that date.

One hundred and twenty miles of the road and telegraph line constructed by the Burlington and Missouri River Railroad Company in Nebraska has been accepted by you, and the commissioners for said road were, on the 30th ultimo, instructed to examine another section of twenty miles. The initial point of this road is at Plattesmouth, Nebraska.

The Missouri, Kansas and Texas Pacific Railway Company, (formerly Union Pacific Railroad Company, southern branch,) having been authorized to extend their line through the Indian Territory, the vice-president thereof reported, under date of the 13th instant, that the extension of the road had been completed, and was then in operation from the southern boundary-line of Kansas to the Arkansas River, about

ninety miles. He states that the piers for the bridge over said river are all built, and that it will be finished by the end of the present month. The road is graded from the Arkansas to the Canadian River, a distance of forty-three miles. It is definitely located to Red River, and the company intend to have it in running order to that point by the 1st of July next, at which time the Texas Central Company promise to have their road constructed to the same point. When the connection is made, there will be one continuous line of rail from New York City to Galveston. The initial point of this road is at Junction City, Kansas, six miles from Fort Riley, and it runs thence down the valley of the Neosho River to the southern line of the State of Kansas, and extends as above stated.

The act of July 1, 1862, (12 Statutes, 498,) requires an annual report, under certain specified heads, to be made by the following-named railroad companies: Union Pacific, Central Pacific, Western Pacific, Central Branch Union Pacific, Denver Pacific, Sioux City and Pacific, and Kansas Pacific. And the act of June 25, 1868, requires that one shall be rendered by each of the companies named below: Northern Pacific, Atlantic and Pacific, and Southern Pacific. Of these ten corporations, two, the Denver Pacific Railway and Telegraph Company, and the Atlantic and Pacific Railroad Company have failed to make a report to this Department for the last fiscal year. The 1st section of the act of 25th June, 1868, (15 Statutes, 79,) requires that the "reports shall furnish full and specific information upon the several points mentioned in the twentieth section of the said act of 1862, and shall be verified as therein prescribed, and on failure to make the same as herein required, the issue of bonds or patents to the company in default shall be suspended until the requirement of this act shall be complied with by such company." In each case where additional portions of roads have been completed and accepted during the year, the instructions given by you in regard to the issuance of patents for the lands due the companies have been carried out by this Department.

#### CAPITOL.

The report of the Architect furnishes details of various improvements and repairs made upon the Capitol extension during the past year. The corridors leading from the Senate chamber to the hall of the House of Representatives have been enlarged, the floor of the hall between the rotunda and the old Representative hall raised to the level of the other floors, and the bronze doors taken from the corridor and placed at the center door of the east front. A steam-engine and two large fans have been placed in the basement of the south wing for the expulsion of vitiated air, and other important improvements have been made in both of the legislative chambers to effect better ventilation. The grounds on the south of the Capitol have been filled in, and a roadway made around the grounds on the north side which marks the line of the proposed street on that side. The Architect recommends that

some provision be made by Congress for inclosing, planting and otherwise improving the grounds surrounding the Capitol building which belong to the United States, and also for paving both of the streets and foot-ways around the lower grounds of the building.

The extension of the Government Printing Office building, located on North Capitol street, authorized by an act of Congress approved March 3, 1871, has been completed, and is now occupied.

That portion of G street, which lies north of the Patent-Office building between Seventh and Ninth streets is being paved with an asphaltic concrete pavement, which has been approved by the Architect, and by the owners of the property lying along the northern side of the said street.

The appropriations asked for make an aggregate of \$99,000, viz: Capitol extension, \$50,000; Capitol repairs, \$10,000; new dome, \$4,000; filling and grading Capitol grounds, \$10,000; and paving B street northeast, \$25,000.

#### BENEVOLENT INSTITUTIONS.

The whole number of persons who received treatment in the Government Hospital for the Insane during the year ending June 30, 1871, was 648, a number greater by 153 than were treated the preceding year; 365 were from the Army and Navy; 491 were males. 194 patients were admitted during said year; 63 were discharged as recovered, 24 as improved, and 9 as unimproved. The recoveries were 45 per cent. of the discharges including, and 66 per cent. excluding, deaths. The number of deaths during the same period was 44, leaving under treatment at the close of said year 508, of whom 309 were from the Army and Navy. 2,999 persons, of whom 1,434 were native born, have been treated at the institution since it was opened. The expenditures for the past fiscal year were \$116,702 72. The sum of \$11,170 65 was received for board of private patients, and \$1,016 18 from the sale of live-stock, &c. The estimated value of the products of the farm and garden during the year was \$10,186 12; and the live-stock, farm and garden implements, &c., belonging to the institution, are estimated to be worth \$14,118 25.

The board of visitors submit the following estimates:

For support of the institution during the year ending June 30, 1873, including \$500 for books, stationery, &c., \$130,000; erection of additional building, \$37,800; erection of two barns and poultry-house, \$9,000; new heating boilers and connections, \$6,000; and for completion of roads and walks, \$2,000; a total of \$185,300.

An act of Congress authorizing the prolonged restraint of inebriates, suggested by the board of visitors in their report, seems to be necessary to the effective reformatory treatment of cases of inebriety occurring in this District, and the passage of such an act, with carefully guarded provisions for determining the fact of confirmed inebriety, and the duration and character of the restraint, is respectfully recommended. It is understood that two or three public institutions for the care of in-

briates, already in full operation, and having many of the material appliances required for the successful, moral, and hygienic treatment of their inmates, will take patients from a distance at a rate of board but slightly in excess of the current cost of their maintenance, and the suggestion of the board, that an arrangement should be made with the proper authority of one or more such institutions to receive inebriates from the District, under the authority of such an act as Congress may see fit to pass, seems to be the only ready and feasible mode of undertaking the correction of that evil habit, which unquestionably gives rise to a large percentage of the crime and domestic suffering which are fearfully prevalent in this, as in most other large communities. Unless Congress should make a small appropriation for the payment of the board of indigent inebriates, that class might be unable to avail themselves of any legal provision that may be made for their reformation.

It is certainly to be hoped that the moderate cost for which handsome and comfortable additional wards for chronic cases have been erected, furnished, and fitted up during the past year, will be regarded by the State and municipal authorities, upon whom the obligation rests, as affording whatever additional evidence may seem to be required that the expense of properly providing for the chronic indigent does not exceed what they can fairly afford, and, therefore, what they are in duty bound to expend, if it be necessary to effect the humane purpose in view.

On the 30th ultimo there were 104 pupils in the Columbia Institution for the Deaf and Dumb, 43 of whom were received since July 1, 1870. Sixty-four of them were in the collegiate department, representing twenty-three States and this district, and 119 have received instruction since July 1, 1870, of whom 101 were males. Eight pupils have left the college during the year, and seven have left the primary department, one of whom was removed by death.

In 1867 and 1868, provision was made by Congress for the admission of a limited number of indigent students from the States into the collegiate department free of charge. Twenty-five, the number authorized, were duly admitted, and were pursuing their studies with a view to graduation when Congress, in 1870, repealed the laws under which they entered. Had not the directors been able, with funds derived from sources other than the United States Treasury, to continue to support these young men, they would have suffered the evident injustice of being dismissed from an institution to which they had been sent by the Government to be educated before the term of education for which they were entered was completed. Simple justice would seem to demand that Congress should so amend its action as to allow these youths to complete the course of study upon which they entered as beneficiaries of the United States; and, further, it would seem not improper that Congress, having established the only collegiate school for deaf-mutes

in the country, and having provided it with suitable buildings and a competent corps of professors, should make its advantages available to persons of that class in the several States. I would commend the matter to the consideration of Congress, with the suggestion that probably some method of appointment could be devised, similar to that made use of in the military and naval schools of the Government, which should secure to the people of the States an impartial distribution of the benefits of this, the only institution of its grade. The directors urge, and justly, that Congress, having aided largely in the endowment of colleges for bearing-youth, ought, in some way, to provide similar facilities for a class of persons who, though bereft of one sense, have proved themselves capable of receiving and profiting by education as readily and as fully as their more favored brethren.

The receipts for the support of the institution during the last fiscal year exceeded the disbursements \$389 40. The disbursements for the erection and fitting up of buildings were \$8,380 30 less than the receipts, and the amount received for the improvement of grounds exceeded the disbursements \$2,302 01.

The directors have purchased for the institution the estate known as Kendall Green. Eighty-one acres of land, lying within two miles of the Capitol, and adjoining the former premises of the institution on two sides, were secured, together with two dwelling-houses and other valuable improvements, for the sum of \$85,000. Toward the payment of this the directors are providing by subscription for \$15,000, together with the interest that has accrued or may become due up to the 1st of July, 1872. There will then remain to be paid the sum of \$70,000, for which they ask Congress to make an appropriation. I have examined the land in question, and consider that a due regard to the interests of the institution demands its retention. Prior to the purchase of Kendall Green, the premises of the institution comprised but nineteen acres, an amount plainly insufficient. The price agreed upon for the new purchase is low, compared with the present market-value of land similarly situated, and its proximity to the old corporate limits of the city insures a prospective rise in value, promising a handsome profit, should it be found desirable hereafter to sell any portion of the land. I therefore recommend that the appropriation be made.

The board of directors submit the following estimate for the fiscal year ending June 30, 1873:

Support of the institution, including \$500 for books and apparatus .....	\$48, 000
Payments falling due on or after July 1, 1872, on the purchase of the Kendall Green property .....	70, 000
Improvement of grounds.....	6, 000
Deficiencies the current year .....	9, 500
<b>Total.....</b>	<b>133, 500</b>

During the last fiscal year 2,256 women were treated by the officers of the Columbia Hospital for Women and Lying-in Asylum, of whom 38 were pay-patients. One thousand six hundred and twenty-five were restored to health, 307 relieved, 2 sent to the Government Hospital for the Insane, 18 died, and 304 remained under treatment. The estimates for the ensuing fiscal year are as follows: For subsistence, medicine, salaries, fuel, light, and bedding, \$18,300; for rent of building and necessary repairs, \$5,000; making an aggregate of \$23,300, being \$4,800 in excess of those submitted for the current year. The directors report that the utmost economy in the expenditure of the hospital has been observed during the past year, and that the advance over the appropriation made for the current year is necessitated by the rapidly-increasing demands upon the institution.

#### JAIL AND REFORM SCHOOL.

On the 20th ultimo there were in the custody of the warden of the District jail 83 prisoners, 10 of whom were females. During the year preceding this date 1,335 persons were committed, 184 of whom were females; 896, of whom 136 were females, were convicted of various misdemeanors; 40 were sent to the Reform School; 39 were sentenced to imprisonment in the penitentiary at Albany, New York; 1,112 were released; and 1 was executed. The expenses of the jail during the year, including the cost of transporting prisoners to Albany penitentiary, salaries, repairs, &c., were \$39,583 72, being \$4,007 95 less than those of the preceding year.

I deem it incumbent upon me, at this time, to allude to the pressing necessity for a new jail-building for this District. The present structure is utterly unfit for the purposes for which it is used. The arrangement of the cells, the absence of sewerage and proper accommodations, and the poor material of which it is built, render it a most unfit place for the confinement of prisoners, whether their safe-keeping or health be considered; and solitary confinement, classification, beyond that of sex, &c., are impracticable. The insecurity of the building necessitates the employment of a much larger force of guards than would be required were a proper jail-structure to be erected, involving a considerable item of expense which would be thereby avoided.

The subject has been adverted to, at considerable length, in the three last annual reports of this Department, in one of which, that of Mr. Secretary Browning, of November 30, 1868, a full history of the matter is given. I earnestly concur in the suggestion made by Mr. Secretary Cox, in his report of October 31, 1870, that the difficulties which exist in carrying into effect existing legislation be removed by Congress, in order "that the selection of a site for a new jail-building should not be limited to one of the public reservations."

There were 46 boys confined in the Reform School on the 5th of October, 1870, and 58 were received during the year ending on the 5th ultimo,

making 104 juvenile offenders who have been cared for during said year. The criminal court committed 3, the police court 43, the board of trustees 10, the mayor of Washington 1, and the mayor of Georgetown 1; 15 had lost both parents, and 24 one. Their ages range from ten to eighteen years, the majority being from twelve to fourteen years old. All but 11 were born in this District and the adjoining States; 45 were of American parentage, and 37 were committed for petit larceny. There were discharged during said year 38, and 1 escaped, leaving 65 in the school on the 5th ultimo, although the board report that but 60 can be properly accommodated at present. Of those discharged, 2 were fully reformed, 27 were released by the expiration of their respective terms of sentence, and 9 were sent away to make room for others committed by the courts, although, in the judgment of the board, these last should have been longer detained, in order to effect a more complete reformation. They, therefore, earnestly recommend that the law governing the courts in the premises be so amended that said courts shall be required to give notice of the sentence, in each case, of juvenile offenders to the president of the board of trustees, and await his order to forward the boy to the school; and, also, that all such offenders shall be committed until fully reformed, or during their minority, giving the board discretionary power to discharge when, in their judgment, a complete reformation has been accomplished.

The board report very favorably upon the general behavior of the boys, the improvement in their morals, and their proficiency in their studies. They are required to work on the farm half the day, and to be in school the other half. Especial care is also taken for their moral and religious education.

No appropriation for the support of the school having been made at the last session of Congress, the board would have been compelled to close the school had not several humane gentlemen, merchants and others, agreed to furnish the necessary supplies, and await an appropriation by Congress for payment of their accounts. The indebtedness, thus contracted, for provisions, clothing, &c., amounts to \$3,646 49, and the treasurer of the school having permitted the superintendent to over-check upon him to the amount of \$230 97, the total indebtedness of the school on the 5th ultimo amounted to \$3,877 46. The cash expenditures for salaries, provisions, clothing, &c., during the year ending on that date, amount to \$7,066 62, aggregating, with the indebtedness of \$3,646 49, the sum of \$10,713 11, as the total expenditure of the school for said year. Unless an appropriation be made by Congress at an early date, the board state that they will be compelled to close the school.

The board report that they have been unable to obtain any money from the city of Washington since the school was commenced. The amount due prior to the recent change of government in this District was \$3,345 80, and since then the sum of \$1,034 08 has accrued, making a total of \$4,379 88. There is also due from parents and guardians the sum

of \$69 51, making an aggregate of \$4,449 39 now due from those two sources.

The experience of the past year has demonstrated the insalubrity of the present location of the school, it being exposed to the malarial atmosphere of the Potomac River. The board, therefore, earnestly recommend that, before permanent buildings for the school are provided, another location, more remote from the river, be selected, the first requirements of which shall be pure air and water, and good soil. That portion of the farm which will not be required for aqueduct purposes might be sold, and the proceeds, with an additional sum to be appropriated by Congress, applied to the purpose of the new location.

In view of the great benefits which this community must derive from an institution of this kind, and also those which would result from it as a model national institution, the board of trustees earnestly hope that Congress will make provision for erecting buildings for it sufficient to accommodate at least 300 boys.

The following are the estimates for the next fiscal year: For support of the school, \$12,000, and deficiencies of the current year, \$8,000; a total of \$20,000.

#### METROPOLITAN POLICE.

The Metropolitan Police force consists of 238 men, of whom 6 are detectives. In view of the fact that the population of this District is one-third greater than when the present number was fixed by law, and is rapidly increasing, the board earnestly recommends that an increase to the force be authorized to the extent of 16 sergeants and 50 privates, or patrolmen.

The members of the force have been active and vigilant in maintaining good order and protecting the rights of persons and property within the District. During the year ending September 30 last, 11,462 persons were arrested, of whom 1,980 were females. Seven thousand one hundred and fifty-two of those arrested were unmarried, and 4,427 could neither read nor write; 4,902 were dismissed, 15 turned over to the military, and 1,277 committed to the jail; 77 were sent to the Reform School, 792 were committed to the work-house, 188 gave security to keep the peace, and 43 cases were undisposed of at that date. In 557 cases minor punishments were inflicted, and fines were imposed in 3,611 cases, amounting to \$33,879 32; 4,409 destitute persons were provided with temporary lodgings, 187 lost children were restored to their homes, 323 sick or disabled persons were assisted and taken to the hospital, and 211 horses, cattle, &c., were returned to their owners. Of the number arrested, all but 2,238 were born in the United States; 7,790 were charged with offenses committed upon the person, and 3,672 with offenses against property. During the year, lost or stolen property to the amount of \$8,144 35 was recovered by precinct officers, and a large amount of money and property has been recovered, the loss of which was never reported.



The detective force made 296 arrests, recovered lost or stolen property to the amount of \$13,948 78, and rendered other valuable and important service. .

The sanitary company have been actively employed in the abatement of nuisances and the enforcement of the police regulations for promoting the cleanliness and health of the city. Several important amendments to the law governing the company are submitted for the consideration of Congress.

#### TERRITORIAL PENITENTIARIES.

The penitentiary at Boise City, Idaho Territory, was completed on the 14th of January last, and, on the 13th of May following was, pursuant to the act of Congress approved January 10, 1871, placed in the custody of the marshal of the United States for that Territory.

The commissioners appointed by the legislative assembly of Washington to select a site for a penitentiary in that Territory selected a tract of land, situate on McNeill's Island, near the city of Steilacoom, and the deed by which the property was conveyed to the United States was submitted to, and approved by, the Attorney General of the United States. The site was approved by this Department, and proposals were invited for the erection of one wing of the building, in accordance with plans and specifications prepared by the Architect of the Capitol Extension. Three proposals were received, but as neither of them came within the amount of the appropriation made for that purpose by the act of Congress approved January 22, 1867, I was compelled to reject them all. Congress appropriated the sum of \$40,000 for the erection of penitentiaries in each of the Territories of Colorado, Idaho, Montana, Arizona, and Dakota, and but \$20,000 for that in Washington Territory. I am reliably informed that a suitable building for the reception and safe-keeping of convicts cannot be erected for a much less sum in Washington than in any of the other Territories, and therefore recommend that an additional appropriation of \$20,000, to be set apart from the proceeds of collections of internal revenue in that Territory, be made by Congress for that purpose.

Commissioners were appointed by the Governor of Wyoming to select a site for a penitentiary in that Territory, and fixed upon a tract of land, one mile square, situate within the Fort Saunders military reservation, near Laramie City. The Commissioner of the General Land Office certified that the location was on land owned by the United States, and the Secretary of War seeing no objection to a penitentiary being located upon said reservation, I approved the site, and caused proposals to be invited for the erection of one wing of the building. Several bids have been received, but none accepted, and, owing to the lateness of the season, it is probable that no active measures looking toward the erection of the building will be taken until the opening of the ensuing spring.

Inasmuch as the fund for defraying the expenses of the courts of t'

United States, which also includes the cost of keeping prisoners, was transferred to the Department of Justice on the 1st day of July, 1870, the date when the law creating that Department went into effect. I respectfully suggest that additional legislation be had by Congress, with a view of transferring from the Secretary of the Interior to the Attorney General all supervision and control now exercised by the former over such convicts as come within the terms prescribed by the acts of Congress, respectively, approved March 12, 1864, March 3, 1865, March 2, 1867, June 14, 1870, and by the act to establish in the District of Columbia a House of Correction for Boys, approved July 21, 1866.

It appears to me eminently proper that the Department that has the control of the fund out of which the expenses of keeping the United States prisoners are defrayed, should also have the power of making contracts and of exercising all such control over them as is now vested in the Secretary of the Interior; and for that reason the Department of Justice is the proper one to exercise such supervision and control. I hope, therefore, that Congress will, at its next session, take such measures as may be necessary to transfer to the Department of Justice the full control of matters of this nature.

In making appointments in the clerical force of the Department, strict attention has been given to the qualifications of applicants, no appointments being made to clerkships of any grade until the applicant has been subjected to an examination touching his fitness for the position. This course has had a beneficial effect in increasing the efficiency of the working force of the various bureaus, by giving to the service a much better class of clerks. Promotions have also been made for merit and efficiency, with like beneficial results. By a strict enforcement of the system of examinations now in use in the Department, with such improvements, from time to time, as experience will suggest, the service will be improved. This plan will be continued in this Department until a better is suggested.

I am, sir, very respectfully, your obedient servant,

C. DELANO,

*Secretary of the Interior.*

The PRESIDENT.

# PAPERS

ACCOMPANYING

## REPORT OF THE SECRETARY OF THE INTERIOR.

### REPORT OF COMMISSIONER OF GENERAL LAND OFFICE.

DEPARTMENT OF THE INTERIOR,  
*General Land Office, November 1, 1871.*

SIR: In compliance with a resolution adopted by the Senate of the United States, February 28, 1855, I have the honor to present the following as an abstract of the accompanying annual report for the fiscal year ending June 30, 1871, viz:

	Acres.
Disposal of public lands by ordinary cash sales.....	1, 349, 942. 37
Military, bounty-land warrant locations, under acts of 1847, 1850, 1852, and 1855.....	525, 920. 00
Homestead entries under act of 1862 and amendments.....	4, 600, 326. 23
Agricultural college scrip locations.....	494, 446. 98
Certified to railroads.....	2, 911, 934. 36
Certified for wagon-roads.....	397, 941. 44
Lands approved to States as swamp, and selected as indemnity for those covered by adverse rights.....	424, 537. 01
Chippewa and Sioux Indian scrip locations.....	16, 513. 00
Total.....	10, 765, 745. 39
Sales of previous year.....	4, 095, 413. 00
Increased disposal.....	2, 670, 292. 39
Cash receipts under various heads.....	\$2, 929, 244. 70
Total area of the land States and Territories.....	1, 834, 934. 400
Surveyed within the last fiscal year.....	22, 016. 608
Which, with the 524, 462.461 acres already surveyed, amounts to.....	550, 879, 069
Leaving yet to be surveyed.....	1, 284, 119, 331

#### *List of papers constituting annual report of the Commissioner of the General Land Office.*

1. Surveys of public lands, showing progress made during the past fiscal year, and giving list of United States surveyors and districts under their immediate superintendence; also, list of the different district land offices.
2. Synopsis of the surveying service in the different surveying districts.
3. Survey of morass lands along Little Calumet River.
4. Survey of confirmed private land claims in Colorado.
5. Survey of Indian reservations, comprising the Ponca reserve, Nez Percé, White Earth Indian reservation, Osage diminished reservation

in Kansas, Indian reservation in Oregon, Chickasaw, Cherokee, Creek, and Seminole lands, Indian Territory.

6. Survey of the eastern boundary of Nevada, northern boundary of Utah, and recommendations that measures be taken to properly define the following boundaries: Western and southern boundary of Wyoming; western boundary of Kansas, part of southern boundary of Colorado, part of eastern boundary of New Mexico, northern boundary of Nevada, eastern boundary of California, boundary between Georgia and Florida.

7. Indian lands.

8. Indian reserve lands.

9. Osage Indian trust and diminished reserve.

10. Useless military reservations.

11. Of pre-emption and proposed additional legislation in regard to the same, by which existing laws may be repealed and the settlement right extended to homestead claimants, thus uniting in one statute the principal features of both laws.

12. Of homesteads and proposed amendments to homestead laws, recommending that the law be so extended as to provide: 1. That wives who have been abandoned by their husbands may perfect homestead claims and avail themselves of the term of settlement made by the husband; 2. That agricultural college scrip be received in commutation of homestead entries; 3. That the term of service rendered by soldiers in the war of the rebellion be deducted from the five years' settlement and cultivation required by law.

13. Graduated lands; further legislation recommended, by which suspended cases may be disposed of.

14. Town sites.

15. Educational land bounty.

16. Emigration.

17. Railroads.

18. Chippewa Indian scrip.

19. Sixteenth and thirty-sixth sections in Indian reservations.

20. Swamp lands.

21. Spanish and Mexican titles, opinions, and decisions; abstract of New Idria mining case. Recommends legislation to provide for the more speedy adjustment of private land claims.

22. Mining statutes of July 26, 1866, and July 7, 1870. Operations and rulings under the same, and recommendation that the law of 1866 be so amended as to require definite surveys of claims prior to publication of notice, and a specific time within which to file adverse claims.

23. Instructions relative to the assignment of land warrants.

24. Suggestions as to a reorganization of the clerical force of the office and increased compensation to the heads of divisions; also as to the appointment of special agents to visit and supervise local land offices.

25. Reports of surveyors general, numbered from A to Q.

26. Tabular statements accompanying Commissioner's annual report, viz:

No. 1. Tabular statement showing the number of acres of public land surveyed in the States and Territories up to June 30, 1871; also the total area of the public domain remaining unsurveyed within the same.

No. 2. Statement of public lands sold; of cash and bounty-land scrip received therefor; number of acres entered under the homestead law of May 20, 1862; of commissions received under the sixth section of said act; also land located with scrip under the agricultural college and mechanic act of July 2, 1862; and commissions received by registers and receivers on the value thereof; and statement of incidental expenses

thereon in the first half of the fiscal year commencing July 1, 1870, and ending June 30, 1871.

No. 3. Statement showing like particulars for the second half of the fiscal year ending June 30, 1871.

No. 4. Summary for the fiscal year ending June 30, 1871, showing the number of acres disposed of for cash; with bounty-land scrip; by entry under the homestead laws of May 20, 1862, and June 21, 1866, with aggregate \$10 homestead payments; homestead commissions; also locations with agricultural college and mechanic scrip, under act of July 2, 1862.

No. 5. Statement showing the quantity of swamp lands selected for the several States under acts of Congress approved March 2, 1849, September 28, 1850, and March 12, 1860, up to September 30, 1871.

No. 6. Statement exhibiting the quantity of swamp land approved to the several States under acts named in table No. 5, up to September 30, 1871.

No. 7. Statement exhibiting the quantity of swamp land patented to the several States under acts approved September 28, 1850, and March 12, 1860; also the quantity certified to the State of Louisiana under act approved March 2, 1849.

No. 8. Statement showing the State selections under the internal-improvement grant of September 4, 1841, on the 30th June, 1871.

No. 9. Exhibit of bounty-land business under acts of 1847, 1850, 1852, and 1855, showing the issue and locations from the commencement of operations under said acts to June 30, 1871.

No. 10. Statement showing the selections made by certain States of lands within their own limits, under agricultural and mechanic act of July 2, 1862, and its supplemental acts of April 14, 1864, and July 23, 1866; also the locations made with scrip under said acts.

No. 11. Statement exhibiting land concessions by acts of Congress to States, for canal purposes, from the year 1827 to June 30, 1871.

No. 12. Statement exhibiting land concessions by acts of Congress to States and corporations for railroad and military wagon-road purposes, from the year 1850 to June 30, 1871.

No. 13. Estimate of appropriations required for the office of the Commissioner of the General Land Office for the fiscal year ending June 30, 1873.

No. 14. Estimates of appropriations required to meet expenses of collecting the revenue from sales of public lands in the several States and Territories for the fiscal year ending June 30, 1873.

No. 15. Estimates of appropriations for the surveying department for the fiscal year ending June 30, 1873.

No. 16. Estimates of appropriations required for surveying the public lands for the fiscal year ending June 30, 1873.

No. 17. Statement of confirmed Indian pueblo grants and private land claims in New Mexico.

No. 18. General tabular statement exhibiting the following: 1. States and Territories containing public land; 2. Areas of States and Territories containing public lands, in square miles and acres; 3. Quantity sold; 4. Entered under the homestead laws; 5. Granted for military services; 6. Granted for agricultural colleges; 7. Approved under grants in aid of railroads; 8. Approved swamp selections; 9. Quantity granted for internal improvements; 10. Donations and grants for schools and universities; 11. Locations with Indian scrip; 12. Locations with boat scrip, under act of March 17, 1862; 13. Estimated quantity granted to wagon roads; 14. Quantity granted to ship canals; 15. Salaries;

Seats of government and public buildings; 17. Granted to individuals and companies; 18. Granted for deaf and dumb asylums; 19. Reserved for benefit of Indians; 20. Reserved for companies, individuals, and corporations; 21. Confirmed private land claims; 22. Quantity remaining unsold and unappropriated June 30, 1871.

27. Connected map of the United States, from ocean to ocean, exhibiting the extent of surveys, land districts, seats of surveyors general's offices, and district offices, also localities of railroads of general interest, and of mineral deposits, this being the map, the plate of which is especially referred to in joint resolution No. 2, approved January 26, 1863, 12 U. S. Stats., p. 822.

During the past fiscal year, the returns received in this office from the different district land offices show a total of 102,983 entries of all classes, and there have been examined and entered upon the tract books 101,410 entries, and 25,345 have been approved and passed for patents. There have also been received and registered 47,917 letters, and 37,834 have been written and recorded. Upon assuming control of this office in the month of February last, I found nearly every branch of the business greatly in arrears. As almost if not quite the entire clerical force of the office is requisite and necessary to the prompt and proper execution of current work, the task of bringing up the business thus found in arrears has been a difficult one. Such progress has been made, however, as to justify the belief that this work may be accomplished in time, with the force at present employed, but I am fully satisfied that it would be to the interest of both the Government and parties having business with this office, for Congress to provide for a temporary increase of the clerical force, as with such increase a large amount of business which has been in arrears for months and years could be brought up immediately, and a great saving of time to the Government and of expense to parties effected thereby.

Respectfully submitted.

WILLIS DRUMMOND,  
*Commissioner.*

The Honorable SECRETARY OF THE INTERIOR.

DEPARTMENT OF THE INTERIOR,  
GENERAL LAND OFFICE,  
November 1, 1871.

SIR: The operations of this branch of the public service for the past fiscal year have been as follows, to wit:

#### 1.—SURVEYS OF PUBLIC LANDS.

Surveys of public lands have been prosecuted in the several surveying districts, seventeen in number, by deputy surveyors, under the immediate superintendence of United States surveyors general, appointed for the following States and Territories:

*District of Kansas.*—Lawrence, Kansas, C. H. Babcock.

*District of Minnesota.*—St. Paul, Minnesota, C. T. Brown.

*District of Dakota.*—Yancton, Dakota, W. H. H. Beadle.

*District of Colorado.*—Denver City, Colorado Territory, W. H. Leslie.

*District of Idaho.*—Boise City, Idaho, L. F. Cartée.

*District of California.*—San Francisco, California, J. R. Hardenbergh.

*District of Nevada.*—Carson City, Nevada, E. S. Davis.

*District of New Mexico.*—Santa Fé, New Mexico, T. Rush Spencer.

*District of Oregon.*—Eugene City, Oregon, Wm. H. Odell.

*District of Washington Territory.*—Olympia, Washington Territory, P. Ferry.

*District of Nebraska.*—Plattsmouth, Nebraska, E. E. Cunningham.

*District of Montana.*—Helena, Montana, John E. Blaine.

*District of Utah.*—Salt Lake City, C. C. Clements.

*District of Arizona.*—Tucson, Arizona, John Wasson.

*District of Florida.*—Tallahassee, Florida, M. L. Stearns.

*District of Louisiana.*—New Orleans, Louisiana, E. W. Foster.

*District of Wyoming.*—Cheyenne, Wyoming, Silas Reed.

There are eighty-two land districts in the land States and Territories, for the accommodation of the people who desire to purchase and obtain title to public lands, two of which were established by acts of Congress within the last fiscal year—one at Susanville, California, and the other at Walla-Walla, Washington Territory.

The following is a correct list of—

## UNITED STATES LAND OFFICES.

Ohio.	Arkansas—Continued.	California—Continued.
Willicothé.	Camden.	Susanville.
<i>Indiana.</i>	Harrison.	Stockton.
	Dardanelle.	Los Angeles.
Indianapolis.	<i>Florida.</i>	Visalia.
<i>Illinois.</i>	Tallahassee.	Shasta.
Springfield.	<i>Iowa.</i>	<i>Nevada.</i>
<i>Missouri.</i>	Fort Des Moines.	Carson City.
	Council Bluffs.	Austin.
Boonville.	Fort Dodge.	Belmont.
Clinton.	Sioux City.	Aurora.
Springfield.	<i>Montana Territory.</i>	<i>Minnesota.</i>
<i>Alabama.</i>	Helena.	Taylor's Falls.
Huntsville.	<i>Arizona Territory.</i>	St. Cloud.
Montgomery.	Prescott.	Alexandria.
Mobile.	<i>Utah Territory.</i>	Jackson.
<i>Mississippi.</i>	Salt Lake City.	New Ulm.
Jackson.	<i>Wisconsin.</i>	Litchfield.
<i>Louisiana.</i>	Menasha.	Du Luth.
	Falls of St. Croix.	<i>Oregon.</i>
New Orleans.	Stevens Point.	Oregon City.
Natchitoches.	La Crosse.	Roseburg.
<i>Michigan.</i>	Bayfield.	Le Grand.
	Eau Claire.	<i>Kansas.</i>
Detroit.	<i>California.</i>	Topeka.
East Saginaw.	San Francisco.	Salina.
Onia.	Sacramento.	Independence.
Marquette.	Marysville.	Concordia.
Traverse City.	Humboldt.	Angusta.
<i>Arkansas.</i>		<i>Washington Territory.</i>
Little Rock.		Olympia.
33 Ab		Vancouver.
		Walla-Walla.

*United States Land Offices.—Continued.*

<i>Nebraska.</i>	<i>Dakota Territory.</i>	<i>Idaho Territory.</i>
West Point.	Springfield.	
Beatrice.	Vermillion.	Boise City.
Lincoln.	Pembina.	Lewiston.
Dakota City.	<i>Colorado Territory.</i>	
Grand Island.	Pueblo.	<i>Wyoming Territory.</i>
	Central City.	
	Denver City.	
	Fair Play.	Cheyenne.
<i>New Mexico Territory.</i>		
Santa Fé.		

The total area of the land States and Territories is 1,834,998,400 acres. Of this amount there have been surveyed within the fiscal year ending June 30, 1871, 22,016,600 acres, which, with the 528,962,461 acres surveyed up to the beginning of the said fiscal year, amount to 550,979,069 acres; leaving yet to be surveyed, 1,284,119,331 acres.

For further detailed information, I beg leave to refer to tabular statement No. 1 accompanying this report.

## 2.—SYNOPSIS OF THE SURVEYING SERVICE IN THE SEVENTEEN SURVEYING DISTRICTS.

*Florida.*—The act of July 15, 1870, provided the sum of \$10,000 for continuing the extension of the public surveys in this State during the year ending the 30th June last. Under said appropriation the surveyor general entered into three surveying contracts, creating in the aggregate an estimated liability of \$9,880.

The area over which the subdivisinal surveys were extended during the year, as returned to this office, is 427,819 acres, making the aggregate of surveyed lands at the close of the year 27,531,587 acres, leaving unsurveyed in this State an estimated area of 10,399,933 acres.

It is proposed during the next fiscal year to extend the standard township and subdivisinal surveys in the vicinity of Lake Okeechobee and along the Caloosahatchee River, and for this purpose an estimate of \$21,000 is submitted.

*Louisiana.*—The sum of \$10,000 was appropriated for surveys in this State during the past fiscal year. Of this amount the sum of \$2,000 was applied to the survey of the public lands generally, and the remainder to the survey of the public lands and private claims in the township in which the city of New Orleans is situated. In addition to the amount set apart for the survey of the New Orleans township, out of the appropriation made by Congress, the city authorities appropriated \$3,000, and placed the same under the control of the United States surveyor general, in order to hasten this long-deferred survey.

For continuing the subdivisinal surveys in the southwestern and northwestern districts in Louisiana during the fiscal year ending June 30, 1873, an estimate of \$21,240 is submitted.

*Minnesota.*—The regular appropriation for continuing the public surveys in this State during the year ending June 30, 1871, was \$40,000. Under this appropriation eight surveying contracts were entered into by the surveyor general, absorbing the entire amount. In addition to the regular appropriation, Congress provided the sum of \$95,980 for surveys along the line of the Northern Pacific Railroad; \$5,000 of which was set aside by the act for clerk-hire in the office of the surveyor general, leaving \$90,980 available for surveys in the field. Under the latter appropriation, the surveyor general has entered into twenty-one contracts, the estimated liabilities of which amount in the aggregate to \$88,768 50. During the past year the public lines have



been extended over an area of 3,209,686 acres, making the aggregate area surveyed in this State up to June 30, 1871, 29,327,305 acres, and leaving unsurveyed an estimated area of 24,132,535 acres.

To fulfill the obligations under the several acts of Congress granting lands to aid in the construction of railroads, and to meet the requirements of actual settlers upon the public domain, an estimate of \$75,000 for surveys in Minnesota during the next fiscal year is submitted.

**Dakota.**—The act of Congress of July 15, 1870, appropriated \$20,000 for surveying the public lands in Dakota during the last fiscal year, and provided that one-half of that amount should be expended in the Pembina land district. Contracts to the entire amount were entered into by the surveyor general, in accordance with the terms of the act making the appropriation, and the particular localities selected as the sphere of surveying operations were those toward which immigration was rapidly tending, or where the surveys were most required by actual settlers. During the past fiscal year the subdivisional surveys were extended over 533,163 acres, making a total of 6,577,427 acres surveyed up to 30th June, 1871, and leaving 90,018,413 acres yet to be surveyed.

To meet the demands of the settlers in the southern portion of the Territory, and in the valley of the Red River of the North, and to facilitate the selection of lands granted to the Northern Pacific Railroad, the construction of which is now rapidly progressing, an estimate of sixty thousand dollars (\$60,000) for continuing the public surveys in Dakota during the next fiscal year is submitted, and the appropriation of that amount respectfully recommended.

**Nebraska.**—The sum of \$40,000 was appropriated for surveys in this State during the fiscal year ending June 30, 1871. Under this appropriation nine surveying contracts were entered into by the surveyor general, covering the entire amount appropriated, a large portion of which was applied to the extension of the surveys along the line of the Union Pacific Railroad, in the western part of the State. During the year the subdivisional surveys were extended over an area of 2,221,623 acres. The aggregate area surveyed up to June 30, 1871, was 21,571,130 acres, and the area remaining unsurveyed at that date estimated at 27,065,670 acres. To accommodate the large number of settlers upon the unsurveyed lands, and to meet the obligations under the grant to the Union Pacific Railroad, which has been in operation for several years, an estimate of \$60,000 for surveys in Nebraska during the next fiscal year is submitted.

**Kansas.**—The sum of forty thousand dollars (\$40,000) was appropriated for surveying the public lands in Kansas during the past fiscal year, and the whole amount was expended in the western and southern portions of the State. The area covered by the subdivisional surveys, made during the year, is 7,003,411 acres, of which 4,792,790 acres are within the Osage diminished reservation, authorized to be surveyed by section 12 of the act of Congress approved July 15, 1870. (Statutes, vol. 16, p. 362.) The total area surveyed in the State up to June last was 36,173,074 acres, leaving unsurveyed at that date an estimated area of 15,870,446 acres.

To meet the obligations under the various acts of Congress granting lands to aid in the construction of railroads, and the demands of actual settlers, who are moving into Kansas in great numbers, an increased appropriation for surveys during the next fiscal year will be needed, and an estimate of \$70,000 is therefore submitted.

**Montana.**—In this Territory the public surveys have been prosecuted to the full extent of the appropriation.

The surveyor general reports that the standard lines have been extended into the Beaverhead, Rattlesnake, Boulder, Bitter Root, and Smith River Valleys, rendering it practicable to subdivide the lands in the valleys as rapidly as the advancing settlements may require. In addition to this, forty-six townships have been surveyed and subdivided, and returns thereof made to this office, and plats and descriptive lists filed in the local land office at Helena. The aggregate area covered by the subdivisional surveys of the past year, as returned to this office, is 873,622.65 acres. The surveys in Montana, owing to the abrupt and mountainous character of a great portion of that Territory, are, to a considerable extent, disconnected, and have been restricted mainly to those detached bodies of lands available for actual settlement, but great care has, at the same time, been taken to make the projection as regular as practicable.

The surveyor general reports that there have been seven applications for mining surveys during the past year.

It is proposed during the next fiscal year to extend subdivisional surveys within the limits of the Judith Basin and the valley of the Yellowstone on the east; along the Sun and Teton Rivers on the north; over Horse and Thompson's Prairies on the west, and over a number of fractional townships on the south.

The construction of the Northern Pacific Railroad through Montana will open up many extensive valleys and plains heretofore inaccessible to the immigrant, and a rapid increase of the population of the Territory will be the result, rendering an increased appropriation necessary, in order that the public surveys may keep pace with the advancing settlements, and that the selection of lands granted by Congress to aid in the construction of the railroad may be facilitated. This office, concurring in the recommendation of the surveyor general, that an increased appropriation may be made for surveys in Montana during the next fiscal year, submits an estimate of \$50,000 for that purpose.

*Wyoming.*—The sum of \$40,000 was appropriated for surveys within the limits of the grant to the Union Pacific Railroad during the year. Twelve surveying contracts were entered into under this appropriation, creating in the aggregate an estimated liability of \$39,725. The subdivisional surveys made during the year, as returned to this office, embrace an area of 770,167 acres. There remains unsurveyed in this Territory an estimated area of 61,874,953 acres.

An estimate of \$50,000 is submitted for continuing the public surveys in Wyoming during the next fiscal year, which amount it is proposed to apply to the extension of the lines over the agricultural, mineral, and grazing lands, and within the limits of the grant to the Union Pacific Railroad, in order that the selection of the lands granted to the railroad may be facilitated.

*Colorado.*—The act of July 15, 1870, appropriated the sum of \$40,000 for the extension of the public surveys in the Territory of Colorado during the past fiscal year, and the further sum of \$10,000 for the survey of public lands within the limits of the land grant to the Union Pacific Railroad. Under the regular appropriation, the surveyor general entered into ten surveying contracts, which have been completed, and returns made to this office. The aggregate liability under these contracts was \$39,928 10, leaving but \$71 90 of the appropriation unexpended. Under the appropriation for the survey of railroad lands, two contracts were entered into, amounting to \$9,612 85. The act of Congress approved July 1, 1870, entitled "An act to confirm the title of the heirs of Gervacio Nolan, deceased, to certain lands in the Territory

of Colorado," required the extension of the public lines over said lands, and accordingly four surveying contracts were made for that purpose, amounting to \$9,500. The area over which the subdivisional surveys were extended during the year, as returned to this office, is 1,276,572 acres, making the aggregate area surveyed in the Territory, up to 30th June, 1871, equal to 8,902,899 acres, and leaving unsurveyed an area estimated at 57,977,101 acres.

An estimate of \$50,000 is submitted for surveys during the next fiscal year in this Territory, along the lines of the several land-grant railroads and in the mineral districts; also in such other localities as may be required for the accommodation of actual settlers.

*New Mexico.*—The sum of \$10,000 was appropriated for surveys in this Territory during the fiscal year ending June 30, 1871, and the entire amount was covered in two contracts for the survey of those lands for which there was the greatest demand by actual settlers. According to the returns made to this office, the subdivisional surveys were extended during the year over an area of 161,414 acres. The total number of acres surveyed in the Territory, up to June 30, 1871, was 4,402,273 acres, and there remained unsurveyed at that date an estimated area of 73,166,367 acres.

In order to provide during the next fiscal year for the extension of the public surveys east of the Rio Grande del Norte, along the projected railroad route, near the thirty-second parallel of north latitude, and in the mineral region of the Territory, to enable the miners to have their claims surveyed and connected with the public surveys, an estimate of \$40,000 is respectfully submitted.

*Idaho.*—The sum of \$20,000 was appropriated for surveying purposes in Idaho Territory. Six contracts were entered into by the surveyor general, consuming in the aggregate the entire appropriation. The surveys have been extended over that part of the Territory where the interests of the people most demand them, and where immigration was most rapidly tending. Of the surveys in this Territory, 130,129 acres were Nez Percé Indian lands, surveyed into twenty-acre tracts, in conformity to article 3, treaty of June 9, 1863.

During the last fiscal year subdivisional surveys have been made over an area of 491,324 acres. The aggregate area surveyed up to 30th June, 1871, was 1,524,055 acres, and the remaining unsurveyed at that date was estimated at 53,704,105 acres.

*Utah.*—The sum of \$20,000 was appropriated for the survey of public lands in Utah. An additional appropriation of \$10,000 was also made for the survey of public lands within the limits of the land grant of the Union Pacific Railroad Company.

Seven contracts were entered into under the general appropriation of \$20,000, reaching, in the aggregate, \$18,250, and three contracts under the special appropriation, amounting to \$9,000. The subdivisional surveys within the fiscal year extend over an area of 551,438.42 acres, and the total of surveys up to June 30, 1871, includes 3,762,946 acres, leaving unsurveyed 50,302,129 acres.

The surveyor general was notified by this office that an appropriation had been made for the eastern boundary of Nevada, which forms the western boundary of Utah, and that the work would be done under the supervision of the surveyor general of Nevada; and was instructed, in consideration of this fact, in surveying the extreme western portion of Utah, not to extend the lines of public surveys beyond the 114th meridian west from Greenwich.

*Nevada.*—The appropriation for this State was \$47,000. The act pro-

vided that \$17,000 (including the sum of \$10,625, appropriated by act of July 20, 1868) might be used for the survey of the eastern boundary line of the State, thereby setting aside \$6,375 out of the appropriation of \$47,000 for the survey of the boundary line, and leaving the sum of \$40,625 for the survey of public lands.

The said boundary line has been astronomically determined and established, and the residue of the appropriation, \$40,625, exhausted in eight contracts for the survey of public lands.

There were surveyed during the past fiscal year 1,054,556.50 acres, and the entire number of acres surveyed up to June 30, 1871, amount to 4,876,447, leaving 66,861,294 acres yet to be surveyed.

*Arizona.*—The appropriation by Congress for surveys in this Territory, per act of July 15, 1870, was \$10,000.

Five contracts were entered into, embracing in the aggregate the entire appropriation.

The subdivisinal surveys during the past fiscal year extend over an area of 189,559.62 acres. The aggregate area surveyed up to June 30, 1871, was 1,951,343 acres, leaving yet to be surveyed an estimated area of 70,954,961 acres.

*California.*—By the act of July 15, 1870, the sum of \$50,000 was appropriated for the survey of public lands in this State.

Thirty-five contracts were made by the surveyor general, absorbing the entire appropriation. In addition to this there were eighteen contracts entered into under the provisions of the act approved May 30, 1862, authorizing the survey of public lands at the expense of applicants. During the past fiscal year the subdivisinal surveys in California were extended over an area of 818,846 acres, making the aggregate area surveyed up to the 30th June, 1871, 33,900,632 acres, and leaving unsurveyed at that date an estimated area of 87,047,208 acres.

During the ensuing fiscal year it is proposed to extend the public lines over the finally confirmed private claims where no request for a survey was made within ten months from July 23, 1866, and any final confirmation thereafter made, as provided by section 8 of the act of that date, entitled "An act to quiet land titles in the State of California;" also to extend the lines over the mineral portions of the State and within the limits of the grants to the several railroads, some of which have already been completed and are awaiting surveys in order to enable the companies to select the granted sections; and for these purposes an estimate of \$70,000 is submitted.

*Oregon.*—The act making appropriations for the surveying service for the past fiscal year provided the sum of \$40,000 for the survey of the public lands in Oregon. Ten surveying contracts were entered into by the surveyor general, covering an estimated liability of \$39,968 10, four of which were let at the enhanced rates authorized by the act for the survey of lands covered by dense forests or thick undergrowth. According to the returns made to this office, there were surveyed in this State, during the year, 677,023 acres, making an aggregate area of 10,140,281 acres surveyed up to June 30, 1871, and leaving unsurveyed at that date 50,835,079 acres. It is proposed to extend the public surveys during the next fiscal year along the Columbia River, within the limits of the grant to the Northern Pacific Railroad, and within the limits of grants to other railroads and wagon-roads; also in regions already settled by pre-emptors awaiting the surveys to enable them to file proofs of their settlement in the local land offices; and for these purposes an estimate of \$70,000 is respectfully submitted.

*Washington Territory.*—The act of Congress approved July 15, 1870,

appropriated \$20,000 for surveys in Washington Territory. Nine contracts were entered into, absorbing the entire appropriation.

The act provides for the survey of regions in the Territory covered by dense forests or thick undergrowth, at augmented rates. But one contract of this character was entered into, and before it was approved by this office the surveyor general was required to furnish all the facts showing the necessity for such survey, and the precise character of the country to be surveyed.

The claims of the Puget Sound Agricultural Company having been adjudicated by the international commission to settle the claims of the Puget Sound and Hudson Bay Companies, arising under the 3d and 14th articles of the treaty of 1846 with Great Britain, the lands embraced in said claims became a part of the public domain, and the public surveys have been extended over a very considerable portion of them.

The number of acres surveyed within the fiscal year was 405,459.82 acres, and up to June 30, 1871, altogether 5,773,719 acres, leaving 39,022,441 acres yet unsurveyed.

### 3.—SURVEY OF MORASS LANDS ALONG LITTLE CALUMET RIVER.

Application was made in August, 1871, for the survey of the morass lands situated along the Little Calumet River, in township 36 north, range 8 west of the 2d principal meridian, Indiana, under the provisions of an act of Congress approved July 1, 1870, entitled "An act in relation to certain unsold lands in the counties of Porter and Lake, in the State of Indiana," (United States Statutes, vol. 16, p. 187.) There being no appropriation for the survey of public lands in the State of Indiana, a deposit of three hundred and fifty dollars (\$350) with the Assistant Treasurer of the United States was made to defray the cost of survey, and a contract was entered into for that amount on the 21st day of August, 1871.

The necessary instructions were issued, and the work is now in progress.

### 4.—SURVEYS OF CONFIRMED PRIVATE LAND CLAIMS IN COLORADO.

The claim of Cornelio Vigil and Cerau St. Vrain, formerly situated in New Mexico, but now in the Territory of Colorado, was confirmed by Congress June 21, 1860, to the extent of eleven square leagues to each of them.

Said claim, as granted by Amijo, the governor of New Mexico, and as described in the order to give juridical possession to the justice of the peace, embraced several millions of acres. The grantees had disposed of numerous tracts of their grant prior to the confirmation by Congress, and greatly in excess of the quantity confirmed, and failed to have their claim surveyed as the law required. As early as May 2, 1867, Colonel W. Craig, one of the derivative claimants under Vigil and St. Vrain, was notified by this office that in order to have the survey of the twenty-two square leagues (confirmed to the said Vigil and St. Vrain) executed, it was incumbent upon them to deposit a sufficient sum to defray the expense of such survey, to the credit of the United States Treasurer, in accordance with the act of Congress approved June 2, 1862, (vol. 12, p. 410,) requiring the cost of survey of private land claims to be paid by claimants. The parties failing to make the necessary deposit, no survey of the confirmed claim was made anterior to the passage of an amendatory act of Congress, approved February 25,

1869, authorizing the Commissioner of the General Land Office to cause the lines of the public surveys to be run in the regions where a proper location would place the said Vigil and St. Vrain claims. As these claims, as well as those of all actual settlers upon the tracts originally claimed by the grantees, holding possession under titles or promises to settle, which had been made by Vigil and St. Vrain, or their legal representatives, prior to the passage of the said act of February 25, 1869, were to be adjusted according to the lines of the public surveys, it became necessary to extend the same over the greater part of the original claim in order to embrace the possessory rights of the derivative claimants, scattered as they were over the vast extent of country embraced in the original claim. Apart from the grantees and the derivative claimants, who were entitled to locate their claims to the extent of the twenty-two (22) square leagues confirmed by Congress, the amendatory act of February 25, 1869, provided for the claims of all actual settlers falling within the located limits of the Vigil and St. Vrain claims, to the extent which would embrace their several settlements, when their claims were established, either as pre-emption or homestead, according to law; and for the aggregate of the areas of this class of claims, the grantees or their legal representatives were entitled to locate a like quantity of public lands, not mineral, and not to exceed one hundred and sixty (160) acres in one section.

The confirmatory act of Congress, approved June 21, 1860, provided that, in surveying the Vigil and St. Vrain claims, the survey should first be made of all tracts occupied by actual settlers "holding possession under titles or promises to settle" given by the grantees, in the tracts claimed by them; and after deducting the area embraced in the twenty-two square leagues, the remainder should be located in two equal tracts, each of square form, in any part of the original tract claimed by the said Vigil and St. Vrain, and wherever they might select.

Inasmuch as the area of the lands claimed by those who had purchased or settled under Vigil and St. Vrain had already been ascertained to reach three times the area confirmed to them, the original grantees made no selections, as contemplated by the act of Congress, within the limited time, and therefore forfeited their rights. In view of this fact, the register and receiver were instructed, March 11, 1870, to receive no applications by homestead claimants or pre-emptors for any land embraced within the original limits of the Vigil and St. Vrain grant, until the derivative claimants, protected by the provisions of the act of February 25, 1869, were first satisfied to the extent of the twenty-two square leagues as confirmed by Congress.

It was ascertained, as already stated, that the derivative claims exceeded, to a great extent, the area confirmed to Vigil and St. Vrain, and the local land officers were directed to adjudicate locations of derivative claimants in accordance with the seniority of their titles to the extent of twenty-two square leagues or ninety-seven thousand six hundred and fifty one (97,651) acres. Owing to the fact that there were many derivative claims scattered over the vast extent of country embraced in the original grant, not located as required by the act of February 25, 1869, within one year from the date of its approval, and proved up to the satisfaction of the register and receiver, as required by law, and as the reason assigned therefor by the claimants was want of notice of the requirements of the act, a joint resolution was passed by Congress April 28, 1870, extending the time for the presentation of this class of claims to one year from the completion and approval of the subdivisional surveys contemplated by the amendatory act of February

25, 1869. In pursuance of the provision of said joint resolution, additional instructions were issued to the surveyor general August 23, 1870, to give further notice to the claimants immediately upon the completion and approval of the surveys contemplated by the act of February, 1869, in order that they might select and locate their claims by legal subdivisions.

Since the passage of the joint resolution aforesaid, and the steps taken by this office to carry out the provisions of the law in relation to the survey and selection of the three several classes of claims under the provisions of the act of February, 1869, numerous applications have been presented by parties wishing to pre-empt or make homestead entries on lands falling within the original limits of the grant, but this office has held that, under the laws, it had no authority to order the lands into market until the derivative claimants were fully satisfied to the extent of their claims as confirmed by Congress.

#### 5.—SURVEY OF INDIAN RESERVATIONS.

*Ponca Reserve.*—Pursuant to an order of the honorable Secretary of the Interior, bearing date November 10, 1870, instructions were issued to the surveyor general of Dakota, December 1, 1870, to cause a survey into 80-acre tracts to be made of that portion of the Ponca Indian reservation, situated in Southeastern Dakota, lying between the bluffs and the Missouri River, and extending from the mouth of the Niobrara to the mouth of Ponca Creek.

The portion designated having at that time already been surveyed according to the usual rectangular system, it was simply necessary to have the required subdivisions marked in the field, and the surveyor general was so instructed under advice from the Indian Office. The survey was executed in July, 1871, and plats of portions of three townships, containing in the aggregate 7,198.12 acres, were returned to this office. The cost of survey was paid out of the special appropriation of \$444,480, provided in the act approved July 15, 1870, "for surveys of exterior boundaries of Indian reservations, and subdividing portions of the same," &c.

*Nez Percé Indian Reservation.*—Since the last annual report from this office, the survey, then in progress under the provisions of the first article of the treaty of August 13, 1868, of the Nez Percé Indian reservation, situated in Idaho Territory, has been completed. Plats and field-notes have been returned to this office, and duplicates of the same were transmitted to the Indian Office March 17, 1871. A total area of 746,605 acres was surveyed, at a cost of \$13,458 35, of which \$12,862 41 was paid out of the appropriation of June 30, 1861, (U. S. Stats., vol. 12, p. 33.)

The sum provided in this act was supposed to be sufficient to meet the expenses of the survey, but, as shown above, it fell short of the actual cost of the work \$595 94, which deficiency was paid out of the appropriation of July 15, 1870, relating to similar surveys. A portion of this reservation, embracing lands already improved to a considerable extent, and containing in the aggregate 130,128.97 acres, was subdivided into 20-acre tracts, under the provisions of the treaty referred to.

*White Earth Reservation in Minnesota.*—This reservation, as provided in the second article of the treaty with the Chippewas of the Mississippi, March 19, 1867, (U. S. Stats., vol. 16, p. 720,) was located in conformity with the sixth article of the same treaty, by commissioners appointed for that purpose, who reported to the Indian Office under date of J

ember 23, 1867, the specific boundaries thereof, embracing thirty-six miles square. The Commissioner of Indian Affairs recommended to the Department the survey of the reservation, and by direction of the honorable Secretary this office instructed the surveyor general of Minnesota, October 4, 1870, to contract for the survey of so much of the reservation into 40-acre tracts as the Indian agent might direct, in localities to be designated by him, and to the extent in cost of survey of \$33,480, to be paid out of the appropriation provided for such surveys, by act of July 15, 1870. This contract was approved May 13, 1871, but as yet no return has been made.

*Osage Diminished Reserve in Kansas.*—Under the provisions of the sixteenth article of the treaty with the Osage Indians, concluded September 29, 1865, (vol. 14, p. 690,) Congress, by act approved July 15, 1870, (vol. 16, p. 362,) authorized the survey of this diminished reserve in Kansas, in the same manner as other public lands are surveyed, with a proviso that the assent of the Osage tribe be first obtained. By the terms of the treaty this reservation is bounded on the north by the Osage lands ceded in trust to the United States; on the east by the Osage lands sold to the United States by the first article of said treaty; on the west by the one hundredth meridian of longitude west from Greenwich; and on the south by the former northern boundary of the Cherokee national lands.

The consent of the Indians to the survey of the reservation was obtained on the 22d October, and on the same day the surveyor general was telegraphed to close contracts for surveying the same. The work has been vigorously prosecuted, and returns of survey have been received to the extent of 4,792,789.73 acres. The total cost of the subdivisional surveys of the diminished reservation amounts to \$75,435 64, of which \$75,000 was paid out of the appropriation made by Congress of that amount by act approved March 3, 1871, (U. S. Stats., vol. 16, p. 502,) and the balance, \$435 64, is payable out of the appropriation of July 15, 1870, specifically providing for this and similar surveys. These sums are to be refunded to the Treasury from the proceeds of the sale of lands within the reservation.

*Reservations in Oregon.*—On the 16th of February, 1871, the Commissioner of Indian Affairs made a report to the Secretary of the Interior, recommending that certain Indian reservations in Oregon be surveyed. The recommendation was approved by the Secretary, and instructions were issued to this office to cause the said surveys to be executed to the extent proposed in the report.

In pursuance of said instructions, the surveyor general of Oregon was directed to contract for the survey of Umatilla, Klamath, Warm Springs, and Siletz Indian reservations, the expenses of the same, to the extent of \$13,000, to be paid out of the funds set apart by the appropriation act approved July 15, 1870, for surveying Indian reservations. These contracts amount in the aggregate to \$12,982, and the Commissioner of Indian Affairs was requested to instruct the agents of the several reservations named to furnish the surveyor general with the necessary instructions in regard to the localities, extent, and particular tracts to be surveyed.

Contract was also made for the survey of the Grand Ronde Indian reservation to the extent of \$4,000, in pursuance of the act of Congress approved March 3, 1871, (U. S. Stats., vol. 16, p. 567.) At the writing of this report no returns of these surveys have been made.

Under the provisions of "An act making appropriations for the current and contingent expenses of the Indian Department," &c., approved



March 3, 1871, an appropriation of \$20,000 was made "for surveying such reservations in Oregon, under treaty stipulations, as may be rendered necessary." (U. S. Stats., vol. 16, p. 569.) Instructions were issued to the surveyor general of Oregon, by direction of the Department, dated March 13, 1871, to have Indian reservations surveyed, after consultation with the superintendent of Indian affairs as to the location and extent thereof.

*Chickasaw lands in the Indian Territory.*—The act of Congress of April 8, 1864, authorizes the survey of Indian and other reservations, under the direction and control of the General Land Office, and in conformity to the rules and regulations under which other public lands are surveyed. In accordance with this statute a contract was entered into by this office for the survey of the Chickasaw lands in the Indian Territory into 160-acre tracts, as required by the eleventh article of treaty concluded with the Choctaws and Chickasaws, April 28, 1866. (U. S. Stats., vol. 14, p. 774.) These lands are bounded on the north by the Canadian River, on the east by the lands of the Choctaw Nation, on the south by the main Red River, and on the west by the leased Indian country. The surveyors were instructed to select a suitable initial point in the center of the Chickasaw lands, or in the vicinity of Fort Arbuckle, and perpetuate it by a suitable monument, and from this point to establish a principal meridian and base line, to be known by the designation of "the Indian Base Line and Meridian." The surveyors have returned subdivisive surveys of 65 townships, embracing in the aggregate about 1,350,107 acres, and are, at present, prosecuting with a large force the entire survey, with a view to its early completion.

*Cherokee, Creek, and Seminole lands.*—Contracts were also entered into, on the 3d of December, 1870, for the establishment and survey of the ninety-sixth meridian of longitude west from Greenwich, through the Cherokee lands in the Indian Territory; and to survey and subdivide that part of said lands which lies west of the said meridian, east of the ninety-eighth degree of longitude west, and south of the thirty-seventh parallel of north latitude, disposed of by the Cherokees to the United States by Article 16 of the treaty of July 19, 1866. Also for the survey and subdivision of that part of the west half of the entire Creek lands ceded to the United States by the third article of the treaty of June 14, 1866, which lies between the ninety-eighth degree of longitude west, and a line dividing the Creek lands into two equal parts, excepting therefrom that part which was granted by the United States to the Seminoles by the third article of the treaty of March 21, 1866. Also for the survey and subdivision of that part of the Seminole lands ceded by them to the United States by Article 3 of the treaty of March 21, 1866, which lies east of the ninety-eighth degree of longitude west, excepting the eastern part thereof, equal to a tract of thirty miles square, to be reserved for the Pottawatomies, in accordance with Article 1 of the treaty of February 27, 1867. Also to extend the Indian meridian from the Canadian River north to the thirty-seventh parallel of north latitude, and to establish the necessary standard lines through the said Cherokee, Creek, and Seminole lands. Under these contracts no returns have been received.

#### STATE AND TERRITORIAL BOUNDARIES.

1. *Eastern boundary of Nevada.*—By the act of Congress approved July 20, 1868, there was appropriated for the survey of the eastern boundary of Nevada the sum of \$10,025, which, upon representations of its insufficiency, was by act of July 15, 1870, increased to \$17,000, making the

maximum rate per mile \$40, instead of \$25 provided by the first appropriation. On August 16, 1870, the surveyor general of Nevada concluded a contract with J. E. James, an astronomer and surveyor, who soon after proceeded to the field of operations.

The intersection of the thirty-seventh degree of longitude west from Washington with the center line of the Central Pacific Railroad had been fixed upon as the initial point, because of the facilities it afforded for obtaining longitude by telegraphic communication with points the astronomical position of which had been clearly established.

In the work of properly locating the initial point, Mr. James was assisted by Mr. J. T. Gardner, and the latitude and longitude of Pilot Peak, situated about twenty-two miles south of the railroad, was determined geodetically by triangulations connected with the coast-survey station at Salt Lake City, modifying the resulting latitude by astronomical observations. The monument established on Pilot Peak was found to be in north latitude  $41^{\circ} 01' 10.7''$ , and longitude  $37^{\circ} 21' 54''$  west from Washington. Having measured from this point to a point on the thirty-seventh meridian, the astronomer proceeded north to the initial point, where observations were again taken for latitude. This point was commemorated by a granite shaft eight feet long with two feet of the upper portion dressed one foot square, with the top in the form of a pyramid. The undressed portion is about one foot six inches square. It is surrounded by a mound of boulders six feet in diameter at the base, built to the top of the undressed portion of the shaft. The west face is inscribed "Nevada," the east side "Utah," the north "L. W. 37°," and the south "1870." This monument is situated one chain sixteen links south of the center line of the track of the Central Pacific Railroad. The boundary crosses the track about two and one-half miles easterly from Tecoma. From the initial point northerly the line for several miles passes through a barren country covered with sagebrush. From the seventh to the thirty-first mile, north, it proceeds along the western water-shed of Goose Creek, crossing its main branch between the twenty-eighth and twenty-ninth miles. Leaving the summit at thirty-one miles, a rapid descent is made to Goose Creek Valley, and the line crosses Goose Creek at forty-three miles and twenty-six chains. Through this valley the line passes over rolling hills to the south boundary of Idaho. From the seventh mile to the Idaho boundary the country is represented as well watered by springs and brooks and valuable for grazing purposes. It contains no timber suitable for the manufacture of lumber, but is covered with a scattering growth of piñon and dwarf cedar.

South from the initial point the line passes over the Pilot Peak range of mountains. At the twenty-seventh mile is reached an arm of the Great Desert, and after crossing a low limestone range, another arm, extending from the forty-second to the fifty-fourth mile. These tracts, as well as the salt marsh, which extends from the fifty-fourth to the sixty-first mile, with the broken country onward to the summit of the Toano range, are almost entirely barren and destitute of vegetation. From the summit of the Toano range to that of the Deep Creek Mountains, at the one hundred and eighth mile, meadows covered with bunch-grass are found, and the land is cultivated to a limited extent. On the southern slope of the Deep Creek Mountains cedar and piñon abound, with considerable fir and pine. After leaving the Deep Creek range the line crosses the Snake Mountains, and at the one hundred and twentieth mile enters Snake Valley, following the western slope and crossing Lase Creek at one hundred and seventy-seven miles it continues on the east-

on slope until at the two hundred and fifth mile, after crossing a narrow alley, it enters the low range of hills which border the eastern side of Snake Valley. The land throughout this region, with the exception of limited areas in the immediate vicinity of the numerous brooks and springs, is a useless desert. The low range of hills extending from the two hundred and eleventh to the two hundred and fiftieth miles is well timbered, and good lumber can be manufactured from the yellow pine which is found in abundance. The southern slope of this range is entirely wooded with low cedars, but is apparently destitute of water. The springs and smaller streams of this region invariably sink into the ground, at intervals reappearing, as in the case of the Grand Wash, and flowing afresh as if from a new spring. At the two hundred and fifty-fifth mile the ridge which forms the divide between the waters of the Great Basin and the Colorado River is crossed. Southward the country is barren and assumes a more decidedly tropical character. Scattered groves of cedar and piñon are found from the summit of the divide to the two hundred and eighty-first mile. The mountains are here precipitous and the brooks flow in deep gorges, which are impassable except near their sources. A broad high table-land, barren, and covered with cactus, is found from the two hundred and eighty-first mile to the three hundred and thirteenth. At two hundred and ninety-eight miles and fifty-six chains a monument was erected to mark the intersection of the thirty-seventh parallel of north latitude with the eastern boundary of Nevada, being a point common to this boundary and to the line between Utah and Arizona.

The line now enters the narrow but fertile valley of Virgin River, where the bottom-lands are suited to the production of all kinds of vegetables and tropical plants. Thence the line crosses the barren range of the Virgin Mountains, reaching the summit at the three hundred and twenty-fourth mile, and from that point over bare precipitous rock the line proceeds to the Colorado River, which it reaches at three hundred and fifty-six miles and twenty-three chains from the initial point. Much of the mountain region along this line contains indications of the precious metals, and at several points mines of limited extent are in active operation.

The line was marked with about 350 wooden posts, of which 170 were of cedar, 67 of cottonwood, 37 of pine, 30 of fir, 24 of piñon, and the remainder of mountain mahogany and other woods. Most of these posts were established in mounds, within which were placed a stone marked + or B, and in cases where this method was inconvenient, charred blocks were substituted. In twenty-five instances, points of the line were designated by a mound of turf, or stone, or by a marked rock. About fifty of the mile-points, either from their inaccessible character or from the nature of the ground and the difficulty of procuring proper materials, were not commemorated by monuments of any kind. The whole of the line as established was four hundred and one and a half miles.

2. *North boundary of Utah.*—An appropriation of \$6,480 for the survey of the northern boundary of Utah having been made by act of Congress, approved March 3, 1871, a contract was entered into May 18, 1871, by this office with Daniel G. Major to survey and mark the boundary line in the field.

This boundary line extends from the intersection of the forty-second parallel of north latitude with the thirty-fourth degree of longitude west from Washington, westward on said parallel to its intersection with the thirty-seventh degree of longitude west from Washington, and defines the

respective jurisdictions of the Territory of Idaho on the north and Utah on the south. Information has reached this office that the longitude of the eastern terminus has already been established at Evanston, a station on the Union Pacific Railroad in Wyoming, near the eastern boundary of Utah, the astronomer having availed himself of telegraphic communication with Salt Lake City for that purpose.

Observations for locating the forty-second parallel of north latitude at its intersection with the thirty-fourth degree of longitude west from Washington have also been completed, and the work of marking the parallel is in vigorous prosecution.

Observations for latitude will be taken at some point intermediate between the eastern and western extremities of the boundary, the western terminus having already been determined both in latitude and longitude by Mr. Major in the examination of the eastern boundary of Nevada. At each of the points where observations for longitude were taken I am informed that the results were satisfactory.

3. *Western boundary of Wyoming.*—The public surveys in northeastern Utah having progressed already to close proximity to the western boundary of Wyoming, a necessity exists for defining the respective jurisdictions of the two Territories. The line in question, so far as it is common to Utah and Wyoming, extends from the intersection of the forty-first parallel with the thirty-fourth degree of longitude west from Washington, north on this meridian to its intersection with the forty-second parallel, a distance of about seventy miles. As the longitude of Evanston, near the southern extremity of this line, has been satisfactorily determined, as well as the intersection of the forty-second parallel with the thirty-fourth meridian, one set of observations for latitude only will be required, so that \$40 per mile is believed to be sufficient compensation for surveying and marking this line in the field. It is, therefore, recommended that \$2,800 be appropriated for this purpose.

4. *Southern boundary of Wyoming.*—This line is coincident with the forty-first parallel of north latitude, and extends from the twenty-seventh to the thirty-fourth degree of longitude west from Washington, an estimated distance of three hundred and seventy miles. It separates the jurisdiction of Wyoming on the north from that of Colorado and Utah on the south.

The extension of the lines of public survey, both in Colorado and Wyoming, renders it highly important that this line should be established in the field. The country over which it passes is for the most part exceedingly rugged and impracticable, and its great length will render frequent observations for latitude a necessity. It is thought that the work cannot be properly performed for less than \$60 per mile, and it is therefore recommended that \$22,200 be appropriated for the survey of this important line.

5. *Western boundary of Kansas.*—The necessity for a survey of this line has long existed and was partially recognized by a former appropriation of \$2,500, an amount entirely disproportioned to the work, and subsequently rendered unavailable for the purpose by the act of July 12, 1870, by which it reverted to the treasury. This line extends along the twenty-fifth meridian of longitude west from Washington, from the thirty-ninth to the fortieth parallel of north latitude, an estimated distance of two hundred and ten miles. The country over which it passes is almost without timber, which will render the erection of monuments a labor of great difficulty. The intersection of the twenty-fifth meridian with the thirty-seventh parallel should be established with great accuracy. It is accordingly recommended that \$8,400 be appropriated to

survey and mark this boundary line in the field at a rate not exceeding \$10 per mile.

6. *South boundary of Colorado.*—It is recommended that an appropriation of \$2,400 be made for the survey of that portion of the south boundary of Colorado which lies between the twenty-fifth and twenty-sixth meridians of longitude west from Washington, the amount of the appropriation to be applied at a rate not exceeding \$40 per mile.

*Eastern boundary of New Mexico.*—The small portion of this boundary which lies between the northern boundary of Texas and the thirty-seventh parallel of north latitude is still unsurveyed. It is recommended that the sum of \$1,400 be appropriated for the survey of this line at a rate not exceeding \$40 per mile for an estimated distance of thirty-five miles.

*Northern boundary of Nevada.*—This line is coincident with the forty-second parallel of north latitude, and extends from the thirty-seventh degree of longitude west from Washington to the one hundred and twentieth degree of longitude west from Greenwich—an estimated distance of three hundred and ten miles.

The public surveys on both sides of this line are rapidly approaching the limits of the respective jurisdictions in which they are situated. As this line would extend over a region not readily accessible, and which is for the most part rugged and difficult, it is recommended that an appropriation of \$15,500 be made, to be applied at a rate not exceeding \$50 per mile, for the purpose of accurately defining the boundary line.

*Eastern boundary of California.*—By the act of Congress approved May 26, 1860, the sum of \$55,000 was appropriated for the survey of the eastern boundary line of California. This boundary is defined in the State constitution of California as extending from the point of intersection of the forty-second parallel of north latitude with the one hundred and twentieth degree of longitude west from Greenwich, and running south of the line of said one hundred and twentieth degree west longitude until it intersects the thirty-ninth parallel of north latitude; thence running in a straight line in a southeasterly direction to the Colorado River at a point where it intersects the thirty-fifth parallel of north latitude. The work was first prosecuted through a "superintendent" under direction of the Secretary of the Interior, and subsequently passed into the hands of the General Land Office; not, however, until the funds available from the appropriation had been uselessly expended in determining two of the points of the boundary, neither of which is considered by this office available for the purposes of resurvey.

In 1863, under the joint supervision of California and Nevada, the line was extended north from Lake Bigler to its intersection with the forty-second parallel of north latitude. The subsequent operations of Mr. Major, who surveyed the northern boundary of the State of California in 1868, raise serious doubts as to the accuracy of this line.

The public surveys which have reached Camp Bidwell, the site of Mr. Major's observatory, afford a reasonably-accurate means of comparing the one hundred and twentieth meridian as actually marked under the joint action of California and Nevada, with Mr. Major's determination of the same. The line as actually surveyed is thus found to be about two miles and thirty chains east of the point where the same falls by the computations of Mr. Major.

The observations for longitude at Camp Bidwell were conducted with great care through a period of three lunations. So great a discrepancy ought not, therefore, to pass unnoticed; and since the survey of 1863 has never been recognized by Congress as the true boundary line between

California and Nevada, it is deemed of the highest importance that a new determination of the point of intersection of the one hundred and twentieth meridian with the thirty-ninth parallel, and a resurvey of the boundary to its intersection with the forty-second parallel of north latitude, be ordered by Congress. One hundred and twenty miles and forty-six chains from the initial point in Lake Bigler, on the southeastern portion of the boundary, were surveyed in 1863 under the same authority. The difficulty of running a long transit line at a large angle with the meridian requires no discussion. Mr. Butler Ives, under whose direction as surveyor the line was run, in his report to the Nevada legislature says: "This line cannot be considered as absolutely correct until it is continued to the Colorado River, and the error of intersection with the initial point there corrected back to Lake Bigler." Therefore, this portion of the line can in no sense be considered as properly established in the field. The public surveys have reached the boundary through a large portion of its extent, and an urgent and increasing necessity exists that his most important line may be established by the proper authority at the earliest possible day.

In view of the foregoing facts, an appropriation by Congress of \$41,250, to be expended at a rate per mile not exceeding \$50 for the portion north of the initial point at Lake Bigler, and \$75 for the portion south of the same, is recommended.

10. *Boundary between Georgia and Florida.*—Under the provisions of an act of Congress approved May 4, 1826, a commissioner was appointed on the part of the United States to act in conjunction with a commissioner appointed for the State of Georgia to ascertain and mark in the field between the State of Georgia and the Territory of Florida a straight line from the junction of the Flint and Chattahooche Rivers to the head of the St. Mary's, the same being the common boundary of these two jurisdictions as defined in the above-mentioned act. Andrew Ellicott, who, in 1799 and 1800, had surveyed the then southern boundary of the United States on the thirty-first parallel of north latitude, from the Mississippi to the Chattahooche, seems not to have completed the survey from the Chattahooche to the source of the St. Mary's River, but simply to have established a mound one mile south of what he deemed the true source of that river. This mound, it seems, had been taken as being *itself* the actual terminus of the boundary, by McNeil, in 1825, previous to the survey under the act to which reference is made above; and this, coupled with the fact that the commissioners found themselves constantly diverging from what they supposed to be the true line, caused the authorities on the part of Georgia to withdraw their consent to further operations, on the ground that more particular investigation as to the true source of the St. Mary's was needed. The commissioners, however, ran a "back line" from the junction of the Flint and Chattahooche Rivers as established by McBride, and had proceeded as far as the Wythlacooche, when the swollen condition of that river compelled them to suspend operations. The matter was left in this unfinished condition, and no subsequent official action of a definite character is known by this office beyond the act of Congress approved April 13, 1860, which provided for the adjustment of titles whenever the boundary shall be ascertained, surveyed, and properly confirmed.

It is of great importance that legislation by Congress be had on this subject, looking either to the adoption of some one of the existing lines, or the survey of a new line, according to the true and original intent of the treaty made with Spain in 1795.

During the past two or three years the rapid extension of the public

surveys has shown a necessity for the definite establishment of boundary lines between the various States and Territories. It is desirable not only that settlers near the boundary line of adjoining jurisdictions may know to which of them their franchises properly belong, but also that titles once established may rest undisturbed.

Much special legislation has been enacted and useless expense has been incurred in the settlement of titles granted under a jurisdiction from which they were subsequently either wholly or in part removed by the survey of a boundary line. The permanent establishment of boundary lines would also be of great advantage to the Government in the prosecution of the work of surveying the public lands.

The mileage heretofore allowed for these boundary lines has in too many cases proved entirely inadequate for the quality of work which was needed, and in some cases the amounts appropriated have reverted to the Treasury, because suitable persons could not be engaged to perform the service for the insufficient compensation offered.

The foregoing estimates have been made with the especial view of securing an accurate, durable, and conspicuous marking of all lines by competent and reliable astronomers, and the amount in each case has been carefully considered with reference to the particular difficulties and requirements to be met.

#### 7.—INDIAN LANDS.

Provision is made by the act of Congress of February 6, 1871, for the sale of certain lands in Shawanaw County, Wisconsin, set apart for the Stockbridge and Munsee tribes of Indians. Under this act the lands have been appraised, and the district land officers at Menasha, Wisconsin, instructed to offer the same for sale at their appraised values, after three months' public notice, and to allow private entry to be made of the unsold lands after the close of the offering, but at not less than the appraised values. Cash only is receivable in payment for these lands. At the expiration of a year the lands then remaining unsold are to be again offered at not less than the minimum of \$1 25 per acre, and those remaining unsold after the offering are to be subject to private entry at not less than \$1 25 per acre. Provision is also made for a reservation of not more than 18 contiguous sections for certain of said Indians, and such reservation having been designated by the proper bureau, the land officers have been directed to withhold the same from any other disposition.

#### 8.—INDIAN RESERVED LANDS.

Under the treaty of August 2, 1855, with the Chippewas of Saginaw, Swan Creek, and Black River, townships 17 and 18, in ranges Nos. 3, 4, and 5, in the East Saginaw land district, Michigan, were selected for the benefit of said Indians. The honorable Secretary of the Interior having been informed by the Indian office, May 13, 1868, that said lands were no longer needed for the use of the Indians, directed, under date of July 14, 1868, that the same be restored to market, under circular of January 1, 1836.

In accordance with the above instructions, this office proceeded to restore said lands, on the 5th of June last, by regular advertisement, and returns for that month from the East Saginaw office show sales of 17,125 acres for \$61,470, cash.

ember 23, 1867, the specific boundaries thereof, embracing thirty-six miles square. The Commissioner of Indian Affairs recommended to the Department the survey of the reservation, and by direction of the honorable Secretary this office instructed the surveyor general of Minnesota, October 4, 1870, to contract for the survey of so much of the reservation into 40-acre tracts as the Indian agent might direct, in localities to be designated by him, and to the extent in cost of survey of \$33,480, to be paid out of the appropriation provided for such surveys by act of July 15, 1870. This contract was approved May 13, 1871, but as yet no return has been made.

*Osage Diminished Reserve in Kansas.*—Under the provisions of the sixteenth article of the treaty with the Osage Indians, concluded September 29, 1865, (vol. 14, p. 690,) Congress, by act approved July 15, 1870, (vol. 16, p. 362,) authorized the survey of this diminished reserve in Kansas, in the same manner as other public lands are surveyed, with a proviso that the assent of the Osage tribe be first obtained. By the terms of the treaty this reservation is bounded on the north by the Osage lands ceded in trust to the United States; on the east by the Osage lands sold to the United States by the first article of said treaty; on the west by the one hundredth meridian of longitude west from Greenwich; and on the south by the former northern boundary of the Cherokee national lands.

The consent of the Indians to the survey of the reservation was obtained on the 22d October, and on the same day the surveyor general was telegraphed to close contracts for surveying the same. The work has been vigorously prosecuted, and returns of survey have been received to the extent of 4,792,789.73 acres. The total cost of the subdivisional surveys of the diminished reservation amounts to \$75,435 64, of which \$75,000 was paid out of the appropriation made by Congress of that amount by act approved March 3, 1871, (U. S. Stats., vol. 16, p. 562,) and the balance, \$435 64, is payable out of the appropriation of July 15, 1870, specifically providing for this and similar surveys. These sums are to be refunded to the Treasury from the proceeds of the sale of lands within the reservation.

*Reservations in Oregon.*—On the 16th of February, 1871, the Commissioner of Indian Affairs made a report to the Secretary of the Interior, recommending that certain Indian reservations in Oregon be surveyed. The recommendation was approved by the Secretary, and instructions were issued to this office to cause the said surveys to be executed to the extent proposed in the report.

In pursuance of said instructions, the surveyor general of Oregon was directed to contract for the survey of Umatilla, Klamath, Warm Springs, and Siletz Indian reservations, the expenses of the same, to the extent of \$13,000, to be paid out of the funds set apart by the appropriation act approved July 15, 1870, for surveying Indian reservations. These contracts amount in the aggregate to \$12,982, and the Commissioner of Indian Affairs was requested to instruct the agents of the several reservations named to furnish the surveyor general with the necessary instructions in regard to the localities, extent, and particular tracts to be surveyed.

Contract was also made for the survey of the Grand Ronde Indian reservation to the extent of \$4,000, in pursuance of the act of Congress approved March 3, 1871, (U. S. Stats., vol. 16, p. 567.) At the writing of this report no returns of these surveys have been made.

Under the provisions of "An act making appropriations for the current and contingent expenses of the Indian Department," &c., approved



March 3, 1871, an appropriation of \$20,000 was made "for surveying such reservations in Oregon, under treaty stipulations, as may be rendered necessary." (U. S. Stats., vol. 16, p. 569.) Instructions were issued to the surveyor general of Oregon, by direction of the Department, dated March 13, 1871, to have Indian reservations surveyed, after consultation with the superintendent of Indian affairs as to the location and extent thereof.

*Chickasaw lands in the Indian Territory.*—The act of Congress of April 1864, authorizes the survey of Indian and other reservations, under the direction and control of the General Land Office, and in conformity with the rules and regulations under which other public lands are surveyed. In accordance with this statute a contract was entered into by this office for the survey of the Chickasaw lands in the Indian Territory into 160-acre tracts, as required by the eleventh article of treaty concluded with the Choctaws and Chickasaws, April 28, 1866. (U. S. Stats., vol. 14, p. 774.) These lands are bounded on the north by the Canadian River, on the east by the lands of the Choctaw Nation, on the south by the main Red River, and on the west by the leased Indian country. The surveyors were instructed to select a suitable initial point in the center of the Chickasaw lands, or in the vicinity of Fort Arbuckle, and perpetuate it by a suitable monument, and from this point to establish principal meridian and base line, to be known by the designation of the Indian Base Line and Meridian." The surveyors have returned subdivisional surveys of 65 townships, embracing in the aggregate about 350,107 acres, and are, at present, prosecuting with a large force the entire survey, with a view to its early completion.

*Cherokee, Creek, and Seminole lands.*—Contracts were also entered into, on the 3d of December, 1870, for the establishment and survey of the ninety-sixth meridian of longitude west from Greenwich, through the Cherokee lands in the Indian Territory; and to survey and subdivide that part of said lands which lies west of the said meridian, east of the ninety-eighth degree of longitude west, and south of the thirty-seventh parallel of north latitude, disposed of by the Cherokees to the United States by Article 16 of the treaty of July 19, 1866. Also for the survey and subdivision of that part of the west half of the entire Creek lands ceded to the United States by the third article of the treaty of June 14, 1866, which lies between the ninety-eighth degree of longitude west, and a line dividing the Creek lands into two equal parts, excepting therefrom that part which was granted by the United States to the Seminoles by the third article of the treaty of March 21, 1866. Also for the survey and subdivision of that part of the Seminole lands ceded by them to the United States by Article 3 of the treaty of March 21, 1866, which lies east of the ninety-eighth degree of longitude west, excepting the eastern part thereof, equal to a tract of thirty miles square, to be reserved for the Ottawatomies, in accordance with Article 1 of the treaty of February 1, 1867. Also to extend the Indian meridian from the Canadian River north to the thirty-seventh parallel of north latitude, and to establish the necessary standard lines through the said Cherokee, Creek, and Seminole lands. Under these contracts no returns have been received.

#### STATE AND TERRITORIAL BOUNDARIES.

1. *Eastern boundary of Nevada.*—By the act of Congress approved July 30, 1868, there was appropriated for the survey of the eastern boundary of Nevada the sum of \$10,625, which, upon representations of its insufficiency, was by act of July 15, 1870, increased to \$17,000, making the

2d. That the lines be extended over those unsurveyed reservations upon the out-boundaries of which the public surveys have already been closed.

3d. That reservations at a distance from the regular surveys be surveyed into rectangular lots of convenient size.

4th. That appraisement and sale of lots thus surveyed be made by the local land officers unless otherwise ordered.

This plan having been approved on the 8th of August, 1871, action by this office has been taken as follows:

*Fort Smith, Arkansas.*—The War Department having originally purchased land from settlers for the enlargement of the reservation, a letter was addressed to that Department, requesting information as to the precise limits and status of the reserve. As soon as this information is received the necessary proceedings will be instituted for carrying out the provisions of the act referred to.

*Fort Wayne, Arkansas, and Fort Jesup, Louisiana.*—These reservations were originally established by legal subdivisions. In order to ascertain the fact whether, while they were under the control of the War Department, any portions of them have been sold, a letter has been addressed to that Department requesting information as to the precise limits of the reservations as they now exist. Upon the receipt of the requisite information, steps will be taken to have these useless reservations appraised and disposed of as the law directs.

*Fort Zarah, Kansas, and Fort Sabine, Louisiana.*—The surveyors general of Kansas and Louisiana were authorized, August 11, 1871, to cause the lines of the public surveys to be extended over these reservations, in the same manner as other public lands are surveyed.

*Fort Sumner, New Mexico.*—Instructions were issued to the surveyor general of New Mexico, August 16, 1871, to extend the lines over the reservation whenever the public surveys should reach the same, marking distinctly the limits of the reservation in the returns of the survey.

*Fort Walla Walla, Oregon.*—As it appears that a mistake had been committed in the act in describing Fort Walla Walla as being situated in Oregon instead of in Washington Territory, this office addressed the War Department asking whether there was a Fort Walla Walla in Oregon, and in reply that Department gave the opinion that, as there was no such reservation in Oregon, it would require further legislation by Congress before Fort Walla-Walla in Washington Territory could be disposed of. The case being thus circumstanced, no action has been taken by this office looking to the disposal of this reservation.

*Fort Bridger, Wyoming Territory.*—The commanding general of the Department of the Platte was directed by the War Department to locate the new reservation within the limits of the old one and report what parts of the latter are no longer needed for military purposes, so that the same may be subject to the operations of the aforesaid act of Congress.

The cemeteries at Forts Smith, Sumner, and Bridger, were reserved by order of the President, May 22, 1871, and the control of them thus reverts to the jurisdiction of the War Department.

As soon as the surveys can be accomplished and the necessary information obtained, all of the lands not remaining reserved will be brought into market in accordance with the provisions of the act.

#### 11.—OF PRE-EMPTIONS.

Among the most important interests connected with the public land system the various provisions of the pre-emption laws may be con-

sidered. The granting of pre-emption rights at an early day attracted the attention of the national legislature, although it was only after years of agitation and the pressure of popular sentiment that any settlement right was conceded. All the earlier legislation favored the opposite idea, that of absolute prohibition of a general settlement on the public domain. By an act of Congress approved March 3, 1807, settlers upon any tract of the public domain, without express permission from the Government authorities, were liable to forcible ejection and forfeiture of all their improvements, and it was not until September 4, 1841, that a full departure from this restrictive policy was inaugurated. Few modifications of this act have been attempted, and those rather extensions than limitations of the privileges conferred.

Any person seeking the benefits of pre-emption under the laws now in force must be the head of a family, a widow, or a single man over twenty-one years of age, a citizen of the United States, or must have filed a declaration of intention to become such, and not the owner of 80 acres of land within the United States, and must be a person who has not quit or abandoned his or her own land in the same State or Territory to reside upon the public lands.

Actual settlement upon the tract claimed for the exclusive use and benefit of the pre-emptor, and not for purposes of sale or speculation, must be shown under the rules and regulations of the Department to the satisfaction of the register and receiver. Upon these simple requisites, entry may be made to the extent of one-quarter section, or other compact body not exceeding 160 acres, upon any of the public lands of the United States to which the Indian title has been extinguished, except in the States of Alabama, Mississippi, Louisiana, Arkansas, and Florida, in which, by special act of June 2, 1866, the public lands are brought exclusively within the provisions of the homestead act.

To secure these privileges the settler must comply with the provisions of law as expressed in the acts of Congress, which are substantially as follows: Upon offered lands, which designation for the purposes of the statute is held to cover all lands which have once been formally offered at public sale, even though afterward temporarily withdrawn, he must file with the register of the proper land office his written declaratory statement, describing the tract and giving the time of settlement. This filing must be made within thirty days after settlement, and within twelve months from such date of settlement he must present proof of cultivation, and make payment for the land so described. Upon unoffered lands, the filing must be made within three months from the date of settlement, and within thirty months from such prescribed date of filing, or thirty-three months after settlement, the requisite proof and payment must be made. When the settlement is upon unsurveyed lands, of course no filing can be made, describing it by legal subdivisions, but after survey, and within three months after the filing of the township plat in the district land office, the settler must file his declaratory statement, and within thirty-three months from the filing of the township plat, proof and payment are required. Forfeiture of the land claimed is incurred by failure to comply with either of the respective conditions named above. The law has been strictly enforced on appeal in several recent cases, where the party had filed previous to the inception of an adverse claim, and after the period prescribed by law; which is a modification of the former practice, the rule formerly being that a party who had actually put himself on the record as a settler prior to the inception of any adverse settlement, although not within the time named in the statutes, had, in connection with his actual settler

given sufficient notice for his own protection. It is thought proper to give full publicity to the change in construction, so that settlers may not incur forfeitures by neglect to put their claims on record according to the positive requirements of law.

In the adjudication of pre-emption cases the fact has become apparent that a very large number of claims are at some stage of the proceedings made the subject of complaint. Many of these contests arise from actual adverse interests, but a large number of them are initiated by parties who have no interest in the land, with a view of taking advantage of some alleged defect in the proceedings for the purpose of appropriating to their own use and benefit the labor and improvements of the parties who have made the claim. Even after entry and payment these complaints are frequently preferred, and charges of irregularity on the part of pre-emptors are continually presented.

In view of the facts, that it is not the province of this office to administer punishment or to declare forfeiture, except where such action becomes necessary to the immediate disposition of a case under the law; and that to encourage litigation is contrary to sound public policy; that when proof and payment have been made under the law and rules of the Department, without being questioned by parties in the neighborhood, who had ample opportunity of knowing what claims had been filed; that no stranger to any interest in the land at date of entry can be injured by the issue of a patent; that the full price of the land having been paid, the question remains solely between the pre-emptor and the Government, it is a matter for serious consideration whether parties having no interest in the land should be allowed to initiate a proceeding against an entry already consummated, with a view to further investigation of the good faith of the pre-emptor, and the ultimate cancellation of his entry.

Mr. Secretary Smith, in a decision dated January 15, 1862, in the case of Clark M. Dennis, from the Doniphan, Kansas, district, fully sustained the decision made by this office August 29, 1861, declining to order an investigation after entry, prayed for on the ground of alleged fraud, the party seeking such investigation having, at the date of entry, no interest in the land.

On the 9th of April, 1862, in the case of James C. Vanderpool, from the same office, the Secretary reiterated the doctrine of the former decision, and declined to allow an investigation of the charge of fraud in the pre-emption. Under the administration of my immediate predecessor a contrary practice has grown somewhat into favor, and investigations appear to have been ordered to determine charges of fraud brought by strangers to any interest in the lands claimed, and in some cases forfeiture has been declared after such investigations.

On the general principles stated above, however, and in consideration of the great expense attending these hearings; the well-considered doubts entertained by lawyers and judicial authority, as well as by Department officers, upon the question of how far the jurisdiction of the Executive Departments extends to review cases once passed upon and decided upon first presentation, after which the issue of patent is ordinarily a mere ministerial act; and in further consideration of the undue accumulation of such cases upon the dockets and files of the office, whereby merely frivolous and unsubstantial interests interfere to prevent the disposal of cases involving the most important private rights, I have deemed a return to the former practice to be a matter of essential reform, necessary to the best interests of all concerned, and have therefore declined to order hearings after entry in pre-emption cases,

except upon request of parties having color of right or interest in the land prior to the date of such entry. These remarks lead to a phase of the same subject which has from the first prominently presented itself in connection with the pre-emption system, namely, the proper methods to be taken for the protection of the Government interests in the public lands, in view of the frauds, so frequently brought to light, under the pre-emption laws.

The frequent proofs of fraud in pre-emption cases, or at least of most palpable and inexcusable evasion of and want of compliance with the strict letter of the law, may well suggest doubt as to whether, on the whole, some better method for the disposal of the public lands cannot be devised, securing at once protection and encouragement for the settler, and safety and economy for the Government. The law was passed at a period when access to the public lands and means for payment were far more difficult than at present. The great rush of settlement had not then pushed its way into remote regions, nor had the great railroad enterprises of the country given their impetus to the onward movements of civilization.

The great advantages of the homestead law had not then been vouchsafed to the pioneer, nor were its provisions entertained, even in idea, by the most progressive minds of the nation. It is natural to conclude that a law adapted to the state of society existing at the period when pre-emption rights were first recognized may have ceased to secure, in the changed condition of affairs, all the advantages it was intended to confer, or effectually to provide, in the same changed condition, all the safeguards originally guaranteed.

Indeed, there is, in my judgment, a question as to whether or not the pre-emption law is any longer a necessity to our land system. The provisions of the homestead law were undoubtedly sufficient at the date of its passage for a measure of complete substitution for the pre-emption system, if we except the omission of the single feature of priority of settlement, which failed to be recognized.

With the added experience of over eight years of administration of the two systems in immediate connection, it is believed that a complete unification of the law of settlement-rights is now not only desirable but easily attainable. To secure this I would recommend the following legislation, viz:

1. The repeal of all existing laws granting pre-emption rights.

2. The modification of the homestead law by consolidation into a single statute of its main provisions, with the following additional features:

- a. The recognition of priority of settlement as a basis of the right to take a homestead embracing the house of the settler, or permanent improvements already made with the intention of actual residence. To secure this privilege I would recommend that sixty days after settlement, or after filing the township plat where such plat has not been filed prior to date of settlement, be allowed within which entry must be made; also that any party making entry under the law be required to make oath, in connection with the usual affidavit, that, to the best of his knowledge and belief, there is no person residing on the land sought to be entered, entitled to enter the same as a homestead. After sixty days no contest based on alleged prior settlement should be allowed against the homestead entry.

- b. The right, after the lapse of eighteen months from date of entry, to pay for the land at the proper Government price, and receive a patent therefor, upon making satisfactory proof of settlement and cultivation

and actual residence upon the land, initiated within six months from date of entry, and continued up to the date of payment.

A restriction as to quantity that shall be reasonable and uniform, allowing 160 acres or a less quantity outside of railroad limits; and not exceeding 80 acres, or one-half quarter section, inside such limits, whether upon odd or even sections of Government land. In entries of adjoining half-quarter or quarter-quarter sections where a slight excess appears, I would recommend a proviso that such small excess be treated as properly included in the entry, without requiring cash payment therefor in making the homestead entry.

c. A positive restriction of the privilege to a single entry by the same person, except where his entry is canceled for reasons other than a failure on his part to comply with the terms of the law; providing, however, that no person who has not heretofore made entry under the homestead law, shall be debarred from entry on account of having entered or filed under the pre-emption law.

The great ends to be secured by this proposed consolidation of the homestead and pre-emption laws are the following:

1. The harmonious adjustment of conflicting claims under the operation of this office, thereby giving a consistency and uniformity to its administration not otherwise attainable.

2. The prevention of irreconcilable conflicts between different settlers: one claiming under the pre-emption law, based upon alleged priority; the other presenting a claim equally equitable under the homestead act, which does not recognize such priority.

3. The total discontinuance of the pernicious practice of speculators who flock along the great lines of projected railroads, and into other sections of country giving promise of favorable development, and by merely filing declaratory statements upon the public lands, prevent their acquisition by *bona fide* settlers and secure and hold claims for purposes of illegal sale. This practice has compelled honest pioneers to purchase the fraudulent claims of such illegal pre-emptors or incur expensive litigation to secure title; it has harassed and vexed those who in good faith made actual settlements, and delayed and prevented the disposal of the public lands; it has caused an excessive and unprofitable expenditure of the labor and money of the Government, as well as of the settlers in proceedings to adjudicate the questions thus forced upon them.

4. The certainty of a speedy settlement of conflicting interests by the simplicity of the action required to establish priorities, and other proofs of compliance with law.

5. An additional revenue to the Government from the fees required in the inception of a claim by formal entry which actually appropriates the land, and which offers a greater incentive to its final consummation by patent, than a mere informal filing made without appreciable cost, and held as lightly as it is easily initiated.

6. The clearing from the Government records of a vast accumulation of filings, many of which are purely fictitious, never intended in good faith, but are merely the designations of the claims of speculators, and thus stand to the prejudice of *bona fide* claimants.

To effect this clearing of the records, a day should be fixed for the beginning of the operation of the revised statutes, prior to which all pre-emptions should be required to be paid for under proper proof, or transmuted to homestead entries in case parties are too poor to pay for the tracts filed upon.

These are radical changes in administration merely, not in policy. The

great pre-emption feature of our system would still remain, and its advantages would reach a class now wholly debarred from its benefits, viz, the poorer settlers who are unable to pay for their lands under the pre-emption law, and who are unwilling to declare under it for the purpose of securing priority, while they are conscious of an utter want of intention to consummate their entries. In the Southern States, too, where, perhaps, a greater number than in any other section are in need of such privileges, the benefits of the pre-emption laws are now absolutely prohibited. The extension of the settlement feature to the homestead law would at once bring them within its beneficent provisions and inaugurate a system common to all parts of the country.

The privilege of making payment after eighteen months, and at any time within the five years, would equally provide for those who prefer to secure title in that manner and those who might be forced, by change of circumstances, to resort to this method of consummation. Proof of settlement and cultivation to time of payment would then, as now, be available to all such claimants.

#### 12.—HOMESTEAD LAW.

This law has worked the "greatest good to the greatest number," having induced thousands to become producers instead of consumers, thereby adding to the material wealth of the country; yet under its operations many hardships have arisen which the law-makers could not have foreseen and provided for, and which cannot be relieved without additional legislation.

First, it frequently occurs that a party, after initiating a homestead entry, abandons his family and his claim, while his wife and children remain on the land, and that the wife, after having fulfilled the term of occupancy required by the law, dating from the time of her husband's entry, applies to this office for a patent to the homestead in her own name. As under the law the patent cannot be issued on the husband's entry in the name of any other party, except in the event of his decease, the only relief which this office can afford in such cases is, upon a proper showing of the facts, to declare the husband's entry forfeited for abandonment, and allow the wife, as head of the family under the law, to enter the land in her own name. In such an event, however, she is exposed to the risk of losing her homestead, for she is not entitled to a preference right of entry; and even if she succeed in making the entry, the period of her settlement and cultivation of the land under the husband's entry, from its date to its cancellation, cannot be credited to her on her own entry, as the law requires each person to make proof of settlement and cultivation for five years from the date of entry. This may be remedied by an amendment providing that upon satisfactory proof of abandonment the patent shall, after proper showing of compliance with the terms of the law, issue in the name of the wife.

Second, homestead claimants commuting under the eighth section of the act of the 20th of May, 1862, should be allowed to use agricultural college scrip on an equal footing with pre-emptors, paying for their claims under the act of 1st July, 1870, which by existing law is not allowed.

Since the last annual report a number of cases under the homestead law have been presented to this office, wherein the parties have made full proof of settlement and cultivation, but did not present the same within the seven years from date of entry as required by law. As the law does not in terms declare a forfeiture of the claim for this failure to come forward within the time specified, I have considered such cases, where sat

tory reasons are given for the laches, as proper for submission to the board constituted under the act of August 3, 1846, as amended by the subsequent acts of March 3, 1853, and June 26, 1856, to confirm certain equitable cases, and have been sustained in this view by the other members of the board in the confirmation of a number of these claims.

Application was made to pre-empt a tract of land embraced in an odd-numbered section within the limits of the grant to the Burlington and Missouri River Railroad Company, in Nebraska, which was covered by a homestead entry at the date of definite location of the line of the road, but which entry was subsequently canceled. It was held in this case that, by the terms of the grant, all lands to which a homestead right had attached at the date of such definite location, were exempted from the operation of the grant, and that upon the abandonment and cancellation of such rights the tracts became public lands, subject again to the operations of the homestead or pre-emption laws.

This principle has also been considered applicable to pre-emption claims existing on lands at the date of the definite location of the road, and as applicable alike to the granted and indemnity limits.

Under these principles, set forth in various rulings of the Department, the right of the railroad companies to such lands is no longer recognized.

By the decision of a former Secretary of the Interior, it was held that a pre-emptor who settled before a railroad withdrawal, could not afterward commute his pre-emption to a homestead entry so as to defeat that adverse interest. Under the ruling, however, above cited the pre-emption claim withdraws the land from the operation of the railroad grant, and the settler may, as in other cases, commute his right to a homestead.

It was also formerly held that a pre-emptor upon unsurveyed lands could not, after survey, file upon the land and then commute to a homestead entry, but the present head of the Department has expressed the opinion that the law is not adverse to such commutation.

As one of the principal objects of the homestead law is to bring into profitable cultivation the vast extent of our public domain while providing homes for all who may avail themselves of the privilege of the law, it is a matter well worthy of consideration whether or not justice cannot be done to a meritorious class of our citizens, and at the same time the main object of the law in adding to the productive area be attained.

I refer to the soldiers of the Union in the late war, whose services in defense of our homes should entitle them to favorable and liberal provisions for securing homes for themselves.

I would recommend that the term of service rendered by a soldier in the war of the rebellion, be recognized by legislation to the extent of allowing the same to be deducted from the five years' settlement and cultivation required by law.

### 13.—GRADUATED LANDS.

Attention is respectfully called to a large number of unadjusted cases under the act of August 4, 1854, entitled "An act to graduate and reduce the price of public lands to actual settlers and cultivators." In all cases where the entries appeared to be regular they were passed for patenting, and patents prepared subject to delivery on proof of settlement and cultivation subsequent to the entry. There remain on the files of the General Land Office a large number of patents for the class of entries above referred to, for which the parties claiming under the same have never applied. Under the provisions of the act of March 3, 1857,



graduation entries made prior to the passage of the act, in which the purchaser had made the affidavit and paid the purchase-money as required by the act of August 4, 1854, and the instructions issued under said act in force and in the hands of the register at the time when such entries were made, were legalized and patents ordered to issue without requiring proof of settlement and cultivation by the purchaser. Under this act nearly all of the entries made prior thereto have been patented and the patents delivered. On entries made subsequent to this act, there yet remain a number of patents undelivered, which are only surrendered on proof of continuous settlement and cultivation from the date of entry to the date of application for patent, notwithstanding printed instructions were sent to the registers and receivers to notify the purchasers that proof of settlement and cultivation of the lands entered would be required within one year from the date of entry to entitle them to patents. In the absence of such proof, payment of the difference between the graduated price paid and \$1 25, the ordinary minimum price per acre, has been, and still is, required to be made as a condition precedent to the delivery of the patent.

In addition to the entries which are held for proof of settlement and cultivation, but which are regular in other respects, there are a large number of cases suspended for other causes, prominent among which are informalities in the graduation affidavits; most of these errors, however, are only clerical. Prior to the repeal of the act of August 4, 1854, the class of errors and informalities just referred to were reported to the district officers, with instructions to notify the parties in interest and allow them to correct them. Many, however, failed to make the corrections or offer the proof of settlement and cultivation within one year, as required by said instructions. In such cases we have granted the parties the privilege of making payment of the difference between the graduated price and \$1 25 per acre, thus placing these claims on the basis of ordinary cash entries, whereby the graduation affidavit and proof of settlement and cultivation are dispensed with altogether. Under this privilege a number of the suspended cases have been disposed of. The adjustment of this class of claims is both tedious and difficult, and involves much correspondence; this is mainly due to the fact that in a majority of cases now being acted upon, the parties applying for patents have purchased the lands in ignorance of the provisions of the law from those who entered them. In many instances the present claimants have made valuable improvements on the lands thus purchased, and in other cases the fact that parties feel secure in their titles prevents them from making inquiries relative thereto, and consequently this office is unable to reach them through the ordinary channels, and demand the additional payment or claim a forfeiture for non-compliance with the statute.

In consideration of the large amount of this class of lands, upon which extensive improvements have been made by parties who are ignorant of their true status, any action tending toward vacation of these imperfect entries on the ground of non-compliance with the statute, or for other cause, must necessarily work a great hardship to a meritorious class of citizens residing upon and claiming the lands. On the other hand there is reason to believe that a very considerable portion of the entries were made by unscrupulous parties, in contravention of law, for the benefit of speculators who relied upon Congress to confirm the entries by an act similar to that of March 3, 1857, dispensing with proof of settlement and cultivation. Under the circumstances justice would seem to dictate the confirmation of all entries where parties have, in good faith, improved the lands to which they believed they had acquired

perfect titles. I would, therefore, respectfully suggest that an act be passed by Congress confirming the entries in all cases where the present owners may submit, within two years from the passage of the act, satisfactory proof that they have made substantial and valuable improvements on the land claimed by them, and providing further that in all cases where such proof shall not be submitted within the time fixed by said act, the entries shall be canceled.

#### 14.—TOWN SITES.

The act of Congress approved March 2, 1867, (U. S. Stats., vol. 14, page 541,) amendatory of the acts of July 1, 1864, and March 3, 1865, grants to the inhabitants of cities and towns on the public domain the privilege of entering the tracts covered by town-site improvements, at the rate of \$1 25 per acre; the entry to be made by the corporate authorities, or, in case the town is not incorporated, by the proper county judge. The provisions of this act must be complied with by filing or entry prior to the sale of the body of land in which the town site may be included.

The act of 1867 is preferred to that of July 1, 1864, (Stats., vol. 13, page 343,) for the reason that under the first mentioned act the patent issues to the corporate authorities or county judge, and then, under an act of the legislature of the State or Territory, patents are issued to each claimant of a lot.

The act of June 8, 1868, (Stats., vol. 15, page 67,) provides that the inhabitants of any town located on the public lands may avail themselves of the provisions of the act of March 2, 1867, but also provides that the issue of patents to parties who have made entries or who elect to proceed under previous statutes be not prevented.

The act of 1867 provides that where the number of inhabitants is one hundred, and less than two hundred, the entry shall not exceed 320 acres; where the number is two hundred and less than one thousand, not more than 640 acres can be entered; and where the inhabitants number one thousand and over, not more than 1,280 acres; and for each additional one thousand inhabitants, (not exceeding five thousand in all,) 320 acres.

When towns are located upon surveyed land, the entry should conform to the legal subdivisions, and when upon unsurveyed lands the necessary expenses of platting and surveying must be paid by the town authorities, and after the extension of the public surveys the lines will be closed upon the exterior limits of the town. The town authorities or county judge must file a declaratory statement with the register of the proper land office, and if there is no organized land district, the filing must be made with the surveyor general.

The act of 1867 excludes from entry as a town site any lands claimed as mineral, or those embraced in military or other reservations, or covered by a Spanish grant.

In reference to the locations of town sites on the public lands, there has been no new legislation by Congress except the extension of all the town-site laws to the Osage Indian lands in the State of Kansas.

The most important ruling by the Department, since the last report, has been based upon the opinion of the Assistant Attorney General reversing the decision of this office of July 20, 1870, in the matter of the application to enter the town of Springville, Montana Territory.

This office rejected the application on the ground that said town contained but fifty or sixty inhabitants. The Assistant Attorney General advised a reversal of our decision, holding that towns with less than one

hundred inhabitants can enter and obtain title to the public lands under the act of March 2, 1867.

In a decision of August 5, 1871, in the contested case of Salt Lake City *vs.* John J. Slossen *et al.*, the Department held that the selection of tracts of land by town authorities for purposes of trade withdraws the same from pre-emption, notwithstanding such lands were occupied only in part by town improvements at the time of the selection.

#### 15.—EDUCATIONAL LAND BOUNTY.

An important part of the business of the General Land Office is that which arises under the various acts of Congress providing a land bounty in aid of popular education. By the ordinance of May 20, 1785, the sixteenth section of every township was set apart for the support of common schools. In organizing new States and Territories the policy thus indicated has since been adhered to as a settled principle. In 1848, when Oregon was established, an additional section in each township was set apart for schools in that Territory, making the reservation two sections, the sixteenth and thirty-sixth, in every township, and this example has been followed in all new States and Territories since organized containing public lands. The aggregate quantity which, pursuant to this policy, has been granted in the States and reserved in the Territories for common-school purposes therein respectively, is estimated at 67,983,914 acres. As soon as, in running the lines of the public surveys, the school sections "in place" are fixed and determined, the appropriation thereof for the educational object is, under the law, complete, except where they are found to be covered by prior adverse rights. In such cases equivalent tracts are reported as indemnity therefor by the district land officers, who will accept suggestions of desired tracts from the local school authorities, which, on being received here, are entered upon our books, carefully examined, and where found free from objection, are submitted to the Secretary of the Interior for his approval. On being approved by him, they are certified by this office to the State authorities, and become appropriated for schools equally with the regular school sections. The same course is pursued with selections under the act of 20th May, 1826, of school land for townships in which the sections sixteen and thirty-six are, for certain causes, deficient. During the last fiscal year the quantity of land which was certified as school indemnity is 115,371.06 acres.

For the support of seminaries or schools of a higher grade, the quantity of two townships at least, and, in some instances, more, has been granted to each of the States containing public lands, embracing the quantity in the aggregate of 1,082,880 acres. For satisfying this grant tracts containing the quantity granted are selected by the State authorities from the mass of the public lands in the State. By the district officers the selections are reported here, when they are entered upon our books, and where found correct on examination are submitted for the approval of the Secretary of the Interior. When approved the selections are certified by this office to the State authorities, thus conveying title to the tracts selected. During the past fiscal year selections of this class were reported to the extent of 22,047.06 acres.

By the act of July 2, 1862, and supplemental acts, Congress made a grant of land for the support of agricultural and mechanic colleges in the several States to the extent of 30,000 acres for each Senator and Representative in Congress, to which they were respectively entitled according to the apportionment of 1860, making the total quantity of

9,510,000 acres, with the prospect of the grant being extended as contemplated in the act of July 23, 1866, to the several Territories, on their being admitted as States, which, on the basis of two Senators and one Representative in Congress for each, would make an addition thereto of 990,000 acres, and raise the aggregate quantity to 10,500,000 acres. Under this grant the States which contain public land subject to sale at private entry at \$1 25 per acre, select the quantity of land to which they are entitled within their limits, and acquire title thereto in the same manner as in selections for seminaries. During the last fiscal year there were certified 243,437.70 acres of lands so selected for agricultural colleges.

To States not containing such public lands, this office issues, under the law, scrip for the quantity of land to which they are entitled, locatable, not by the States to which issued, but by their assignees, in the States and Territories containing public lands. Of such scrip there were issued during the fiscal year ending June 30, 1871, 1,110,000 acres.

After the scrip is located at the district land offices by the assignees of the States, the locations are duly returned to this office by the district land officers, entered upon our books, examined, and where found free from objection, patents are issued for the located tracts to the parties entitled. Locations of scrip of this description were returned during the last fiscal year to the extent of 335,549.10 acres.

In the several grants above referred to, there is provided for educational purposes, including common schools, universities, and agricultural colleges, a land bounty embracing the estimated aggregate of 79,506,794 acres.

#### 16.—EMIGRATION.

The emigration to the States west of the Mississippi during the last year has been unprecedented.

In Kansas and Nebraska, during fiscal year ending June 30, there were 15,367 entries made under the homestead law alone; adding that number of farms to these commonwealths, and representing a population of not less than 50,000 persons. Of these the larger portion have sought Kansas as the field of their labors. While these two States have been leaders in the progress of settlements, Minnesota and Dakota show a material increase in their productive forces, more than 16,500 persons having entered homestead and pre-emption claims in these communities during the last year. A very large proportion of these entries are made by persons from the various nations of the Old World.

With each succeeding year the tide of immigration to our shores, when not interrupted by wars of great magnitude on the European continent, has steadily increased until it now has assumed not only great proportions, but is carried on with marked system. With a view to answering the frequent inquiries made by citizens of the different European governments, a pamphlet has been prepared for distribution exclusively in Europe, giving a succinct description of our form of government, its political divisions, the peculiarities of the soil and climate, a brief statement of our public-land system, indicating how titles may be obtained under various congressional enactments, and also a synopsis of the naturalization laws, showing the steps necessary to be taken by aliens in order that they may become citizens of the United States and enjoy the privileges of native-born citizens. This pamphlet is also accompanied by a map showing the principal railroads traversing the American continent, from the Atlantic to the Pacific. In order to carry out the purposes for which this pamphlet has been prepared, it will be

necessary to have the same translated into the different European languages, and I would recommend that Congress make a sufficient appropriation to defray the expense of such translation.

The amount heretofore appropriated (\$1,500) for the translation of the annual report, will be ample, and it is proposed to make this pamphlet answer the purposes for which that was intended, believing that it can, on account of its brevity, obtain a wider circulation, and be more extensively read.

#### 17.—RAILROADS.

Continual progress has been made by the several companies to which lands have been granted to aid in the construction of railroads in the Western States, and they are rapidly drawing to completion. One of the most important of these to the nation, the Northern Pacific Railroad, which is to span the continent, has already nearly completed its road across the State of Minnesota, while the surveys for its route through Dakota, Montana, Idaho, and Washington Territories, and the State of Oregon, are being pushed with all the energy that railroad capitalists can enlist; and but a few years will elapse before another road will bind the East and West, bidding for the trade of that Eastern empire from whence has been drawn much of the wealth of Europe. Congress, alive to the importance of speedy transcontinental communication, has given an additional franchise to a southern route, passing through New Mexico, Arizona, and California, and meeting the waters of the Pacific at San Diego. When this is completed the nation will have three separate routes to the Pacific, each with an independent terminus on that ocean, affording ample facilities for the commercial interests of this and foreign countries. In the withdrawal of lands for railroad purposes, the question was raised as to the power of the Secretary to withdraw unsurveyed lands, and upon presentation of the question to the Attorney-General for his views, he expressed the opinion that nothing in the act in any way limited the donation to lands already surveyed, and that unsurveyed lands could be withdrawn. Under this opinion the Department, in the case of the Atchison, Topeka and Santa Fé Railroad Company of Kansas, which was the one under consideration, directed that the unsurveyed lands along the line of its route, and within the limits of the grant, should be withdrawn. This office was in doubt as to whether this order was to be confined to the granted lands or sections in place, or whether it was to embrace also the indemnity lands; and upon submitting the question to the Department, with our views adverse to the withdrawal of unsurveyed indemnity sections, the Secretary directed the restriction of the order to the granted lands, or sections in place, and the withdrawal has been so ordered. In subsequent withdrawals, under other acts, where the donation is not limited to surveyed lands, the same rule has been applied, and the unsurveyed lands withdrawn.

#### 18.—CHIPPEWA INDIAN SCRIP.

Information having reached the Department that much of this scrip issued in late years had been obtained through fraudulent representation, the Secretary directed that the patenting of any locations made with it should be suspended until the matter could be investigated. This order has been carried into effect, and all cases are now suspended until the interdict is removed.

## 19.—SIXTEENTH AND THIRTY-SIXTH SECTIONS.

The States of Wisconsin and Minnesota presented to this office arguments in favor of their claims to the sixteenth and thirty-sixth sections in Indian reservations, or equivalents therefor. In reply, it was held that only the sixteenth and thirty-sixth sections of the public lands, or where they were disposed of, equivalents therefor, were granted to said States by their organic acts; and hence, that any such sections embraced in Indian reservations at the date of said acts were not public lands, and consequently were not granted, nor were the States entitled to equivalents therefor. The claims are now adjusted on this basis.

## 20.—SWAMP AND OVERFLOWED LANDS.

The acts of Congress relating to the granting of swamp and overflowed lands to the various States, are: The act approved March 2, 1849, which, for the purposes of reclaiming that class of lands, and of aiding in the construction of levees, granted the swamp and overflowed lands in the State of Louisiana, with certain specified exceptions, to that State. 2. The act of September 28, 1850, extends the grant to all States then in the Union, and enlarged the same so as to cover the exceptions contained in the grant of 1849 to Louisiana. 3. The act of March 12, 1860, which extends the provisions of the grant to the States of Minnesota and Oregon, and modifies the act of 1850, by limiting the time in all of the States in which the selection of lands under the swamp grant may be made.

As will be seen by the tabular statements elsewhere given, there have been made during the fiscal year selections amounting to 556,475 acres; within the same period there have been approved by the Secretary, lists submitted by this office embracing 428,597.01 acres. There have, also, been 1,168,837.37 acres finally transferred by patent to the States entitled thereto.

In view of the fact that my predecessors have so often called attention to the matter, I deem it only necessary to state, in support of a recommendation that this grant be no further enlarged, that it has attained proportions far in excess of what was the original intent of its projectors, and in its operations has embraced selections amounting to 61,071,356.03 acres, of which 46,276,912.17 acres have been formally conveyed to the States claiming the same.

Under the swamp indemnity act of March 2, 1856, extended by act of March 3, 1857, to that date, no adjustments have been made during the present year. In view of the ruling made by the Department, June 21, 1870, relative to the character of proof required in applications for swamp indemnity, the States have declined to present their claims until the whole question shall have undergone a rehearing.

## 21.—SPANISH AND MEXICAN TITLES.

By the treaty of peace, friendship, limits, and settlement, with the republic of Mexico, concluded at Guadalupe Hidalgo, on the 2d day of February, 1848, as ratified May 30, and proclaimed July 4, 1848, known as the treaty of Guadalupe Hidalgo, and by the subsequent treaty concluded with the same power on the 30th day of December, A. D. 1853, and proclaimed June 30, 1854, commonly known as the Gadsden purchase, the United States acquired jurisdiction of the region now embraced in the States of California and Nevada, and part of the State of

Kansas; also a part of the Territories of New Mexico, Arizona, and Colorado, and nearly all of the Territory of Utah.

As usual in making treaties, clauses were inserted recognizing the rights of property, and guaranteeing their maintenance. The eighth and ninth articles of the treaty of Guadalupe Hidalgo provide as follows:

ARTICLE VIII. Mexicans now established in territories previously belonging to Mexico, and which remain for the future within the limits of the United States, as defined by the present treaty, shall be free to continue where they now reside, or to remove at any time to the Mexican republic, retaining the property which they possess in the said territories, or disposing thereof, and removing the proceeds wherever they please, without their being subjected, on this account, to any contribution, tax, or charge whatever. Those who shall prefer to remain in the said territories may either retain the title and rights of Mexican citizens, or acquire those of citizens of the United States. But they shall be under the obligation to make their election within one year from the date of the exchange of ratification of this treaty; and those who shall remain in the said territories after the expiration of that year, without having declared their intention to retain the character of Mexicans, shall be considered to have elected to become citizens of the United States. In the said territories property of every kind, now belonging to Mexicans not established there, shall be inviolably respected. The present owners, the heirs of these, and all Mexicans who may hereafter acquire said property by contract, shall enjoy, with respect to it, guarantees equally ample as if the same belonged to citizens of the United States.

ARTICLE IX. Mexicans, who in the territories aforesaid shall not preserve the character of citizens of the Mexican republic conformably with what is stipulated in the preceding article, shall be incorporated into the Union of the United States and be admitted at the proper time (to be judged of by the Congress of the United States) to the enjoyment of all the rights of citizens of the United States, according to the principles of the Constitution, and in the mean time shall be maintained and protected in the free enjoyment of their liberty and property, and secured in the free exercise of their religion without restriction.

### *Legislation and rulings in regard to Mexican and Spanish land-grants in California.*

In order to render effective the provisions of the treaty of Guadalupe Hidalgo respecting land-titles in California, and with a view to separate the private from the public lands, Congress, by the act approved March 3, 1851, (Stats., vol. 9, p. 631,) entitled "An act to ascertain and settle the private land claims in the State of California," constituted a commission, consisting of three commissioners, to be appointed by the President, by and with the advice and consent of the Senate, which commission was to continue for three years from the date of said act, unless sooner discontinued by the President. This act was continued in force until March 3, 1856, by the two supplemental acts of 18th January, 1854, (vol. 10, p. 265,) and 10th January, 1855, (vol. 10, p. 603.) Under those laws full and ample opportunity was afforded to every person interested in Spanish or Mexican land-grants to present their claims for adjustment, with the most liberal provisions to enable them to present such testimony in support of their claims as they might desire. Each and every person claiming lands in California by virtue of any rights or title derived from the Spanish or Mexican government was authorized to present his or her claim to the commissioners, together with such documentary evidence and testimony of witnesses as they relied upon to establish their claims, and it was made the duty of the commissioners to examine the same upon such evidence, and upon the evidence produced in behalf of the United States, and to decide upon the validity of such claims, being governed by the treaty of Guadalupe Hidalgo, the law of nations, the laws, usages, and customs of the government from which the claim was derived, the principles of equity, and the decisions

of the Supreme Court of the United States, so far as they might be applicable. And to insure the most careful and thorough examination possible, the Congress of the United States, by the twelfth section of the act approved 31st August, A. D. 1852, (vol. 10, p. 99,) provided that in every case in which the board of commissioners on private land claims in California should render a final decision, it should be their duty to have two certified transcripts prepared of their proceedings and decisions and of the papers and evidence on which the same were founded, one of which transcripts was required to be filed with the clerk of the proper district court, and the other to be transmitted to the Attorney General of the United States, and the filing of such transcripts operated *ipso facto* as an appeal for the party against whom the decision was rendered, and if the decision was adverse to the private claimant it was made his duty to file with the clerk of said court within six months after the rendition of such decree a notice of his intention to prosecute the appeal; and if the decision was against the United States, it was made the duty of the Attorney General, within six months after receiving said transcript, to cause a notice to be filed with said clerk that appeal would be prosecuted by the United States, and on failure of either party to file such notice, the appeal was to be regarded as dismissed, which rendered the proceedings upon the title final. In the event, however, of prosecution of appeal by the claimant or the United States, the judgment of the district court could be taken by appeal to the Supreme Court of the United States, the law thus furnishing to parties interested the fullest opportunity to have their titles passed upon by the highest judicial tribunal. Upon the final confirmation of title, the next proceeding was to have the private claim segregated by survey from the public lands, or from other contiguous private grants. To this end, the thirteenth section of the act of 3d March, 1851, made it the duty of the surveyor general of California to cause all private claims to be accurately surveyed, and to furnish plats of the same, upon the presentation of which plat duly certified and approved by the surveyor general, together with an authentic certificate of confirmation, to the General Land Office, a patent was to be issued, which was to be conclusive between the United States and the claimants, but should not affect the interests of third persons. The same section of said act (section 13, act 3d March, 1851,) provided that "in the location of said claims, the said surveyor general shall have the same power and authority as are conferred on the register of the land office and receiver of the public moneys of Louisiana, by the sixth section of the act 'to create the office of surveyor general of the public lands for the State of Louisiana,' approved 3d March, one thousand eight hundred and thirty-one." (U. S. Stats., vol. 4, p. 492.)

In the discharge of his duties under this law, the surveyor general met with a number of difficulties upon various points, which were from time to time the subject of inquiry by him, and instructions by this office for his guidance. Some of the earlier of these instructions, which are still in force, are herewith presented, as follows:

GENERAL LAND OFFICE, November 28, 1855.

JOHN C. HAYS, Esq.,  
Surveyor General of California.

SIR: In reference to certain questions and difficulties, orally suggested by you at this office, respecting the survey of "private land claims in California," the following is presented for your information and government. \* \* \* Now you will observe that the surveyor general has no power to execute and approve an official survey of any claim until it shall have been "finally confirmed" pursuant to the aforesaid act of 3d March, 1851.

3d. In the survey of finally confirmed claims, you must be strictly governed by the



decree of confirmation; and where the terms of such decree are specific they must be exactly observed in fixing the locality of and surveying the claim.

14. Where the record and decree of final confirmation by the area claims—thus, for example, for a "sitio de ganado mayor," or square league, and the figurative plan, or map, indicative of the limits, gives a surface much larger than the area confirmed, the location is to be taken *within that surface*, in a compact form, according to the lines of the public surveys, at the election of the confinee as to the precise locality; but in such a manner, whenever practicable, as not to interfere with any adverse claims. Where this is not practicable consistently with the calls of the confirmation, the law is explicit as to the proceedings for the settlement of the conflict.

15. In any case of this class the surveyor general should make a formal demand upon the confinee to give, *in writing*, a specific designation of the locality he may elect within the extended limits indicated by the plat in the record, and a period should be fixed within which he should be required to make his election. Failing of compliance it will be the duty of the surveyor general to exercise his sound judgment in fixing the location, having due regard to the rights of the confinee and in conformity to the record.

16. Where a grant is for, say, four sitios with the words "*permanencia de los*," or "to remain or less," the meaning is plain that you are to be governed by the area confirmed; but if in running out the lines of the confirmed claim there is a little more or less than the fixed quantity, it is to be considered as not in any manner affecting the validity of the survey, upon the common-law principle that the law takes no heed of small matters.

17. As to claims which have been confirmed by the board of land commissioners, or by the United States district court, but pending an appeal, the question is presented—What action is the surveyor general to have in regard to them? If not within the range of his regular surveying operations, he is not called upon to take any action whatever, but must let cases of that class remain until a final decree shall have been rendered; then if such final decree is one of confirmation, your line of duty is already indicated;—if one of rejection, the lines of the public surveys are to be extended over such locations, without any regard to their alleged locality.

18. If, however, in the gradual progress of the public surveys, the surveyor general discovers the location of a claim not fully confirmed, but which has been accepted by either the board of land commissioners or the United States district court, and is still pending on appeal, it will be his duty where the exterior lines of such claim are clearly defined—

1. To close the lines of the public surveys *over nearly its exterior by legal boundaries* at such points, either within or without the lines of such claim, as will best bring approximately its alleged boundaries into line; but where the boundaries are not clearly shown, a statement of proceedings should be taken as indicated under the 14th item in the foregoing. The lands covered by claims of this class are to be distinctively signified on the township plats by dotted lines or shading, and special reference to them is to be made in the claim by its number and date. The act of acceptance by the board of land commissioners should also appear on the face of the plat. The lands thus designated should be held in reserve, as covered by unconfirmed claims, until a decree shall have been rendered either of confirmation or rejection.

2. To permit extending the Government surveys, you approach a Spanish or Mexican claim, confirmed by the board of land commissioners, of which a navigable creek or river is a natural boundary, such creek or river may be regarded at the expense of the Government, if not necessary for securing it the lines of the adjacent public survey; but where not navigable you will treat such stream merely as a distinctive boundary, not to be considered, but to be dealt with as an exterior, and as indicated under the 14th item in the foregoing.

19. In cases of claims *sanctioned* by the board, and in which no appeal is taken, within the period stipulated in section 12, act of 11st August, 1852, they are to be treated as public lands, and the lines of the surveys extended over them.

GENERAL LAND OFFICE, May 15—1857.

JOHN C. HAYS, Esq.,

*Surveyor General, San Francisco, California.*

SIR: By the last mail I received your letter of the 29th ultimo, representing your earnest request to the final survey of confirmed private land claims "as attended with much difficulty, and causing distraction on the matters, in which you submit the foregoing." In several cases two, and sometimes three confirmations have been finally made for the same parcel of land.

In very many cases they overlap so much that compromise cannot and will not be made or collected by the parties."

By the thirteenth section of the act of 3d March, 1851, (U. S. Stat., vol. 9, page 623) it is made the duty of the surveyor general "to cause all private claims which shall be finally confirmed to be accurately surveyed, and furnish plats of the same," and

"in the location of the said claims" it confers the "same power and authority" on the surveyor general as the register and receiver have by the sixth section of the act of 3d March, 1831, (see 4th vol. U. S. Stats., page 494,) which is as follows:

"SEC. 6. *And be it further enacted*, That in relation to all such confirmed claims as may conflict, or in any manner interfere with each other, the register of the land office and receiver of public moneys for the proper land district are hereby authorized to decide between the parties, and shall, in their decisions, be governed by such conditional lines or boundaries as have been or may be agreed upon between the parties interested, either verbally or in writing; and in case no lines or boundaries be agreed upon between the parties interested, then the said register and receiver are hereby authorized to decide between the parties in such manner as may be consistent with the principles of justice; and it shall be the duty of the surveyor general of the said State to have those claims surveyed and platted in accordance with the decisions of the register and receiver."

Now, the thirteenth section of the act of 3d March, 1851, merely strikes out register and receiver, and substitutes surveyor general, in matters of conflict in California. You have, then, the power which is delegated to you respecting California claims very plainly pointed out and defined in the statute as above quoted. Whenever, therefore, you have before you for survey claims which conflict, you will, before proceeding to field operations, make a call in writing upon the several claimants to file with you an authentic showing of the "conditional lines or boundaries" which may have been or may be agreed upon between them. You will fix the period for a reply, affording a reasonable time, and in default of the desired showing you will, in virtue of the authority expressly delegated to you by the statute, "decide between the parties in such a manner as may be consistent with the principles of justice;" you will then cause a return of survey to be made, exhibiting on the plat of survey, therewith connected by black lines, the exact limits, according to the final decree of confirmation and in red ink, the conditional lines where agreed upon, or in default of such conditional lines, those lines which you shall adjudge to be those of the survey of the tract, which shall be carried into patent, in the words and figures of the field-notes, which must accompany the finally approved survey. In any case where a survey under a decree of final confirmation shall fall wholly within the limits of another, the grade of title and date of confirmation will, as a matter of course, be the essential data in determining as to which will take precedence, but in any case of that character you should make a full report of all the facts, with illustrative diagrams and your own decision thereon, notifying the claimants of its purport, and then await the ultimate decision of the Department.

Previous to 2d June, 1862, the surveys of private land claims were paid for by the United States, but an act of that date was passed entitled "An act for the survey of grants or claims of land," by which it is provided as follows:

That all claims or grants of land in any of the States or Territories of the United States, derived from any foreign country or government, shall be surveyed under the direction of the proper officers of the Government of the United States, upon the application of the parties claiming or owning the same, and at their expense, which shall be paid or secured to the satisfaction of the Secretary of the Interior before the work shall be performed; but nothing in the law requiring the executive officers to survey land claimed or granted under any laws of the United States shall be construed either to authorize such officers to pass upon the validity of the titles granted by or under such laws, or to give any greater effect to the surveys made by them than to make such surveys *prima facie* evidence of the true location of the land claimed or granted, nor shall any such grant be deemed incomplete for the want of a survey or patent, when the land granted may be ascertained without a survey or patent.—(Stats., vol. 12, p. 410.)

This act was repealed by the act approved February 18, 1871, (vol. 16, p. 416,) but with the proviso "that the repeal of said act shall not affect any rights heretofore acquired under the same." Another law however, which stands unrepealed, (the act of May 30, 1862, Stats., vol. 12, page 409, sec. 3,) provides that "an accurate account shall be kept by each surveyor general of the cost of surveying and platting private land claims, to be reported to the General Land Office, with the map of such claim, and that patents shall not issue for any such private claim until the cost of survey and platting shall have been paid into the Treasury of the United States by the claimant;" and the sixth section of the act of July 1, 1864, (Stats., vol. 13, page 332,) provides that

"each claimant requesting a survey and plat shall first deposit in the district court of the district within which the land is situated a sufficient sum of money to pay the expense of such survey and plat and of the publication required by the first section of this act," so that payment of survey by the claimant of any private land claim is still a requisite of the law. In view of the guarantees of the treaty of Guadalupe Hidalgo to protect and maintain the Mexicans incorporated into the Union of the United States in the "free enjoyment of their liberty and property," with the privilege of "retaining the property which they possess in the" territory acquired by that treaty, "or disposing thereof and removing the proceeds wherever they please, without their being subjected on this account to any contribution, tax, or charge whatever," and in view of the further fact that it is quite as essential to the Government as to the individual that a separation of the private from the public lands should be made, it is suggested that all the provisions of existing laws which require payment to be made by the claimant for the survey and platting of private land claims under treaties with foreign governments should also be repealed.

Surveys under the act of March 3, 1851, were subject to the jurisdiction and control of the Commissioner of the General Land Office, subordinate to the Secretary of the Interior. The surveyor general caused the surveys to be executed. If deemed correct he approved them, and if found satisfactory to this office patents were issued. If excepted to by the parties interested, the case came by appeal, first to this office, and finally before the Secretary of the Interior, whose judgment was final.

By the act of Congress approved June 14, 1860 (U. S. Stats., vol. 12, page 35), jurisdiction was given to the Federal judiciary upon surveys approved by the surveyor general subsequent to its passage. The act provided that whenever the surveyor general of California should, in compliance with the thirteenth section of the act of March 3, 1851, "have caused any private land claim to be surveyed and a plat to be made thereof, he shall give notice that the same has been done and the survey and plat approved by him, by a publication once a week for four weeks in two newspapers, one published in the city of San Francisco, and one of which the place of publication is nearest the land, if the land is situated in the northern district of California; and once a week for four weeks in two newspapers, one published at Los Angeles, and one of which the place of publication is nearest the land, if the land is situated in the southern district of California; and until the expiration of such time, the survey and plat shall be retained in his office subject to inspection." Said act further provided that surveys so made could be brought before the Federal judiciary either by the claimants, upon application by them in the manner prescribed by the statute and under an order of court, or by the United States on motion of the district attorney, founded on sufficient affidavits, and the United States courts had authority finally to adjudicate questions of survey.

The fifth section of said act provided "that when, after publication as aforesaid, no application shall be made to the said court for the said order, or when said order has been refused, or when an order shall have been obtained as aforesaid, and when the district court by its decree shall have finally approved said survey and location, or shall have returned or mentioned the same and determined the true location of the claim, it shall be the duty of the surveyor general to transmit, without delay, the plat or survey of the said claim, to the General Land Office, and the patent for the land as surveyed shall forthwith be issued

therefor, and no appeal shall be allowed from the order or decree as aforesaid of the said district court, unless applied for within six months from the date of the decree of said district courts, but not afterwards, and the said plat and survey so finally determined by publication, order, or decree, as the case may be, shall have the same effect and validity in law as if a patent for the land so surveyed had been issued by the United States." Surveys under this act, therefore, became final either by publication without objection, by order or decree of the United States district court, or by the adjudication of the Supreme Court of the United States.

In the sixth section of the act of June 14, 1860, it was enacted that all surveys and locations theretofore "made and approved by the surveyor general of California which" had at the date of the act "been returned into the said district courts, or either of them, or in which proceedings" were then "pending for the purpose of contesting or reforming the same," were thereby "made subject to the provisions of" said "act, except that in the cases so returned or pending no publication" should "be necessary on the part of the surveyor general."

Under a construction placed upon the sixth section by the judges of the United States district courts for California, those judicial officers, in orders issued in August and September, 1860, directed the surveyor general to publish "all plats of official surveys made and approved by him under the act of March 3, 1851, which up to" the time of said orders he had "not been notified by the Department at Washington of the issuance of patents thereon."

At the December term, 1863, of the United States Supreme Court, the question was presented in the case of the United States *vs.* Sepulveda, (1 Wallace, p. 104,) as to what class of surveys was properly under the jurisdiction of the United States district courts of California. In that case the decree of the board of land commissioners, under the act of March 3, 1851, had become final by an order of the district court dismissing appeal, and directing that the claimants have leave to proceed upon the decree of the land commissioners as under a final decree. The survey of the tract was approved by the surveyor general in 1859, and in 1860 the district court ordered the surveyor general to return a plat of said survey into court.

Mr. Justice Field, in announcing the opinion of the United States Supreme Court, held as follows:

The jurisdiction of the district court to supervise and correct the action of the surveyor general in this case is not derived from the act of June 14, 1860. That act applies to surveys subsequently made, with certain exceptions, within which the present case does not fall. The exceptions embrace only those surveys previously made and approved by the surveyor general, which had been, at the passage of the act, returned into the district courts, or in relation to which proceedings were then pending for the purpose of contesting or reforming the same. The jurisdiction asserted independent of the act of 1860, upon the authority of the decision of this court in the case of the United States *vs.* Fossatt, (21 Howard, p. 445.) In that case the decree had been rendered by the district court, and it was held that the jurisdiction of the court extended not merely to the determination of questions relating to the genuineness and authenticity of the grant presented, and its efficacy in transferring the title, but also to questions relating to its location and boundaries; and that for the settlement of these latter questions the power of the court over the case did not terminate until the issue of the patent conformably to its decree.

Previous to the act of 1860, the jurisdiction of the board and of the district court, on appeal, was derived entirely from the act of March 3, 1851, and the act of August 31, 1852; and when the claims presented were adjudged valid and confirmed, the duty devolved upon the surveyor general to cause them to be surveyed. "For all claims finally confirmed," says the statute, "by the said commissioners, or by the said district or Supreme Court, a patent shall issue to the claimant upon his presenting to the General Land Office an authentic certificate of such confirmation, and a plat or survey

of the said land, duly certified and approved by the surveyor general of California, who shall be directed to cause all private claims which shall be finally confirmed to be accurately surveyed, and to causeish platsof the same." The action of the surveyor in this respect was not in terms made subject to the control of the board or court; it was only made referable to the Commissioner of the General Land Office at Washington, who was invested, by the previous legislation of Congress, with a general supervision over the acts of subordinate officers charged with making surveys. Whatever consideration the district court may have possessed to enforce the execution by the surveyor general of its own decrees, it possessed no control over the execution of the decrees of the board.

It is to be feared that for the determination of the validity of the claims presented, some consideration must have been had of their extent, location, and boundaries. The petitions of the claimants must necessarily have designated, with more or less precision, such extent, location, and boundaries. And where the grants were by notes and bounds, or where proceedings before Mexican authorities, such as took place upon a judicial delivery of possession, had established the boundaries, or where from any other source pending the proceedings a continuation of the boundaries were indicated, it was proper for the board to confirm them in its decrees. And such was the course adopted in numerous instances. But in the majority of cases the grants of the Mexican governors were for a certain specified quantity of land lying within exterior boundaries embracing a tract larger than, and in relation to which no proceedings were ever taken by the former government for its procurement and segregation. In such cases, a confirmation of the title was only a judicial determination of the right of the claimant to have a specified quantity set apart to him out of a general tract. And the duty of the board was discharged by a confirmation of the claim in the general terms of the grant, leaving the specified quantity designated to be surveyed and laid off by the proper officers of the Government, to whom the subject of surveys was intrusted. With the surveys following the decrees of the board, the district court had nothing to do. The surveys of confirmed Mexican grants, particularly when they are for quantities lying within exterior boundaries embracing larger tracts, involve the consideration of various matters not properly the subject of judicial inquiry. In numerous instances, the location of the tract is in controversy, whether it shall be on one or the other side of the general tract now claimed upon the past or intended action of the Government with reference to the Indians. Portions of the general tract may be required, and, therefore, be properly reserved from the location for public purposes. The act of 1860 creates a new jurisdiction in the court, which can not be assumed independent of the act, and under it should be considered only processes coming clearly within its language.

The decree of the district court reversing the action of the surveyor general and correcting his survey, must, therefore, be reversed, and the court directed to dismiss the proceedings, with the usual penalties. If the survey does not conform to the decree of the board, the court must be satisfied from the Commissioner of the General Land Office before presenting such a case to the district court.

Under these two laws, therefore, three classes of surveys were created:

1st. Such as had been approved by the surveyor general *prior* to the act of June 11, 1860, which had not, at the passage of that act, been returned into the district court, or in relation to which proceedings were not then pending for the purpose of contesting or reforming the same. Questions relating to such surveys were determinable "by the proper officers of the Government to whom the subject of surveys was intrusted," the Secretary of the Interior, the Commissioner of the General Land Office, and the surveyor general.

2d. Surveys in relation to which proceedings were pending at the date of the passage of the act of June 11, 1860, for the purpose of contesting or reforming the same, and which afterward became final by direct action of the surveyor, or were finally rejected by them.

3d. Surveys which became final by publication under said act.

The duties of this office in regard to confirmed surveys of the two classes last named are merely ministerial, consisting of the preparation of patents upon the presentation of the requisite proofs to show finality of judicial proceedings, or finality of the survey by publication.

*The act of 1st July, 1864.—U. S. Stats., vol. 13, p. 332.)*

The next act of Congress in relation to private land claims in California is that approved July 1, 1864, entitled "An act to expedite the set-

tlement of titles to lands in the State of California," the effect of which is to remove from the jurisdiction of the courts surveys subsequently made and approved by the surveyor general, and giving them a status in regard to adjustment similar to that of the act of March 3, 1851. The first section of the act provided "that whenever the surveyor general of California shall, in compliance with the thirteenth section of an act entitled 'An act to ascertain and settle the private land claims in the State of California,' approved March 3, 1851, have caused any private land claim to be surveyed and a plat to be made thereof, he shall give notice that the same has been done by a publication, once a week for four consecutive weeks, in two newspapers, one published in the city of San Francisco and one published near the land surveyed, and shall retain in his office for public inspection the survey and plat until ninety days from the date of the first publication in San Francisco shall have expired; and if no objections are made to said survey, he shall approve the same, and transmit a copy of the survey and plat thereof to the Commissioner of the General Land Office, at Washington, for his examination and approval; but if objections are made to said survey within the said ninety days, by any party claiming to have an interest in the tract embraced by the survey, or in any part thereof, such objections shall be reduced to writing, stating distinctly the interest of the objector, and signed by him or his attorney, and filed with the surveyor general, together with such affidavits or other proofs as he may produce in support of the objections. At the expiration of said ninety days the surveyor general shall transmit to the Commissioner of the General Land Office at Washington a copy of the survey and plat, and objections, and proofs filed with him in support of the objections, and also of any proofs produced by the claimant and filed with him in support of the survey, together with his opinion thereon; and if the survey and plat are approved by the said Commissioner he shall indorse thereon a certificate of his approval. If disapproved by him, or if, in his opinion, the ends of justice would be subserved thereby, he may require a further report from the surveyor general of California touching the matters indicated by him, or proofs to be taken thereon, or may direct a new survey and plat to be made. Whenever the objections are disposed of or the survey and plat are corrected, or a new survey and plat are made in conformity with his directions, he shall indorse upon the survey and plat adopted his certificate of approval. After the survey and plat have been, as hereinbefore provided, approved by the Commissioner of the General Land Office, it shall be the duty of the said Commissioner to cause a patent to issue to the claimant, as soon as practicable after such approval." And the second section of said act provides as follows: "That the provisions of the preceding section shall apply to all surveys and plats by the surveyor general of California heretofore made, which have not already been approved by one of the district courts of the United States for California, or by the Commissioner of the General Land Office: *Provided*, That where proceedings for the correction or confirmation of a survey are pending on the passage of this act in one of the said district courts, it shall be lawful for such district court to proceed and complete its examination and determination of the matter, and its decree thereon shall be subject to appeal to the circuit court of the United States for the district, in like manner, and with like effect, as hereafter provided for appeals in other cases to the circuit court; and such appeals may be in like manner disposed of by said circuit court."

The second section made the provisions of the first applicable to all surveys and plats theretofore made by the surveyor general of California

which had not at the date of said act been approved by one of the district courts of the United States for California, or by this office, and provided that where proceedings for the correction or confirmation of a survey were pending in the district court at the date of said act, such judicial examination and determination could be completed, but the decree of the district court in such cases was made appealable to the circuit court of the United States for the district instead of to the United States Supreme Court, as in the case of surveys under act of June 14, 1860, and the circuit court was authorized to dispose of such appeals.

The third section of the act relieved the United States Supreme Court of the jurisdiction upon survey in all cases where appeal from the decree of the district court had not been taken at the date of the passage of the act, and conferred the jurisdiction theretofore exercised by the United States Supreme Court in such cases upon the circuit court of the United States for California, which was authorized fully to determine the matter.

The circuit court has power "to affirm, or reverse, or modify the action of the district court, or order the case back to the surveyor general for a new survey;" but "when the case is ordered back for a new survey, the subsequent survey of the surveyor general shall be under the supervision of the Commissioner of the General Land Office, and not of the district or circuit court of the United States."

In quite a number of cases surveys had been made and approved by the surveyor general prior to the act of June 14, 1860, and in relation to which proceedings were not then pending in court, but which under the orders of the district courts before mentioned were, subsequent to that act, advertised in supposed conformity with the provisions thereof. In accordance with the principles enunciated in the aforesaid decision of the United States Supreme Court in the case of the United States *vs.* Sepulveda, the provisions of the act of June 14, 1860, were not applicable to such surveys, and publication thereof was not authorized by law, nor had the United States district courts jurisdiction upon them, but they remained where the act of March 3, 1851, left them, under the supervision of the Commissioner of the General Land Office; and therefore, in virtue of the statutory enactment in the second section of the act of July 1, 1864, that "the provisions of the preceding section shall apply to all surveys and plats by the surveyor general of California heretofore made, which have not already been approved by one of the district courts of the United States for California, or by the Commissioner of the General Land Office," surveys of this kind require publication for four weeks, and retention in the office of the surveyor general for ninety days, even should publication of the same have been made under the orders of the United States district courts subsequent to the act of June 14, 1860, and before the act of July 1, 1864.

The sixth section of the act points out the course to be pursued by claimants to procure surveys of confirmed claims as follows:

That it shall be the duty of the surveyor general of California to cause all private land claims finally confirmed to be accurately surveyed, and plats thereof to be made, whenever requested by the claimants: *Provided*, That each claimant requesting a survey and plat shall first deposit in the district court of the district within which the land is situated, a sufficient sum of money to pay the expenses of such survey and plat, and of the publication required by the first section of this act. Whenever the survey and plat requested shall have been completed and forwarded to the Commissioner of the General Land Office, as required by this act, the district court may direct the application of the money deposited, or so much thereof as may be necessary, to the payment of the expense of said survey and publication.

The seventh section makes it "the duty of the surveyor general of California, in making surveys of the private land claims finally confirmed, to follow the *decree of confirmation* as closely as practicable whenever such decree designates the specific boundaries of the claim. But when such decree designates only the out-boundaries within which the quantity confirmed is to be taken, the location of such quantity shall be made, as near as practicable, in one tract and in a compact form. And if the character of the land, or intervening grants, be such as to render the location impracticable in one tract, then each separate location shall be made, as near as practicable, in a compact form." The same section makes it the duty of the Commissioner of the General Land Office "to require a substantial compliance with the directions of this section before approving any survey and plat forwarded to him."

*Act of July 23, 1866, "to quiet land-titles in California."—(U. S. Stats., vol. 14, page 218.)*

The seventh, eighth, and ninth sections of this act relate to claims derived from the former governments of Spain or Mexico; and as showing the requirements of this law and official regulations thereunder, extracts from the instructions and rulings communicated to the local land officers in California are herewith submitted, as follows:

DEPARTMENT OF THE INTERIOR,  
*General Land Office, September 13, 1866.*

GENTLEMEN: Annexed is an act of Congress approved July 23, 1866, "to quiet land-titles in California."

Section 7 allows persons who purchased in good faith and for valuable consideration lands of Mexican grantees where the grants have been rejected, or where the lands so purchased have been excluded from the final survey of such grant, to purchase the same from the United States, after the survey of such lands under existing laws, at the minimum price established by law, upon making satisfactory proof before the register and receiver as to their original purchase before mentioned, and that they have used, improved, and continued in actual possession of the same, provided that no valid adverse right or title exist to the same, and provided further, that the right above mentioned shall not extend to lands in the city or county of San Francisco, nor to lands containing mines of gold, silver, copper, or cinnabar.

If it shall be made to appear, by showing from the above class of claimants, that injury would result to permanent improvements from running the lines of public survey through such improvements, the Commissioner of the General Land Office is authorized to recognize existing lines of subdivisions.

In adjudicating and reporting upon any claims coming within this provision, you will take care, in all cases, to obtain from the surveyor general a connected plat exhibiting the exact out-boundaries of such rejected claim, so that when the cases come up for revision at the Department the fact may clearly appear in every case that the tract claimed are within the actual limits of such rejected claim.

The ninth and last section makes provision for appeals from decrees of United States district to the circuit court, in reference to Spanish or Mexican grants, rendered after the 1st day of July, 1865, as provided for by section three of the act of July 1, 1864—provisions you will, of course, take notice of in acting upon any matter connected with such interests; yet the stipulations there made are to be more immediately kept in view by the United States surveyor general in acting upon such cases in regard to applications for the return of surveys as the basis of patents.

A copy of these instructions will be sent to the surveyor general.

Very respectfully, your obedient servant,

JOS. S. WILSON,  
*Commissioner.*

REGISTER AND RECEIVER,  
*San Francisco, California.*

DEPARTMENT OF THE INTERIOR,  
*General Land Office, November 2, 1866.*

GENTLEMEN: \* \* \* \* \* By our letter of 15th September last, in the case of the claim of Juan M. Lucio, esq., you were instructed upon the filing in your



See by the United States surveyor general of the proper plats, to notify said Luco that his application would be received, and steps taken with a view to appointing a time and place of hearing, upon proper public notice to all adverse claimants under the laws of the United States.

In reply to your inquiry as to the nature and character of the applications to be filed under the seventh section of the act of July 23, 1866, before such hearings were to be held, I have to state that it will be necessary for claimants to file with you a sworn statement descriptive of the tracts claimed, and setting forth that they have purchased the same in good faith, and for a valuable consideration, of Mexican grantees or assigns, such grants have subsequently been rejected, or that said tracts have been excluded from the final survey of such grants; also, that they have continued in the actual possession of the same, as according to the lines of their original purchase, and *have used and improved the same*, and that no valid adverse right or title, except that of the United States exists thereto.

By the provisions of the act of March 3, 1853, (ch. 143, vol. 10, p. 244, United States Stats.) the lands within the limits of the Rancho Ulpinos claim became subject to the laws of the United States for the disposal of the public domain, upon the rejection of said claim by the United States Supreme Court; therefore, all valid claims arising under laws of the United States, and having inception by settlement entry, withdrawal for railroad purposes, or selections under grants to the State of California prior to the date of the passage of the act of July 23, 1866, are protected as against claims arising under the seventh section of said act.

Upon application being presented to you as herein required, under said act, you will require that ample notice be given by personal service where practicable, upon all adverse claimants, of the time and place of hearing, and also by publication at the expense of the applicants, in a newspaper of general circulation in the locality wherein the tracts claimed are situated, for at least thirty days prior to the date of hearing, in order that pre-emption and homestead claimants may have ample opportunity to present testimony in support of their claims, adverse to that of claimants under the seventh section of the act referred to. You will please notify Mr. Luco of the requirements herein set forth.

Very respectfully, your obedient servant,

JOS. S. WILSON,  
*Commissioner.*

REGISTER AND RECEIVER,  
*San Francisco, California.*

DEPARTMENT OF THE INTERIOR,  
*General Land Office, March 18, 1870.*

GENTLEMEN: In reply to register's letter of 11th ultimo, I inclose herewith a copy of instructions to the district office at San Francisco, dated September 13, 1866, under the act of July 23, 1866, "to quiet land titles in California."

As an indication of what is required as to the nature and character of applications under the seventh section of the act, I also inclose an extract from our instructions of November 2, 1868, to same office, in the matter of the application of Juan M. Luco, to the upon the rejected "Ulpinos claim." This will be found to embody the general requirements under said seventh section so far as respects individual claimants.

As respects "coterminous proprietors," whose right of "joint entry" is admissible in certain cases, under the act of 1866, I have to state that the proofs must be made separately, and individually, as in other claims, and the question of "coterminous proprietorship" is one of fact, to be drawn from the nature and character of the respective claims, which, when clearly determined by the register and receiver, will serve as a basis for your action, admitting the joint entry when the showing is clear, and rejecting it when the respective rights of the claimants can be separately adjusted and secured. In all cases a full report of your action is desired.

Very respectfully,

JOS. S. WILSON,  
*Commissioner.*

REGISTER AND RECEIVER,  
*Los Angeles, California.*

DEPARTMENT OF THE INTERIOR,  
*General Land Office, September 13, 1866.*

SIR: I have to draw your special attention to the provisions of the eighth and ninth sections of the act of Congress approved July 23, 1866, a copy of which accompanies other instructions to you of this date.

The eighth section contemplates two classes of cases, viz:

1st. Claims derived from Spanish or Mexican authorities which were finally confirmed at the passage of the act of July 23, 1866.

2d. Claims of the same kind which may be confirmed after the passage of the act.

Where parties may present their applications within ten months from the date of said act of July 23, 1866, for survey and plat in cases heretofore finally confirmed, you will of course cause the same to be duly surveyed according to the sixth and seventh sections of the act of July 1, 1864, (Stats., vol. 13, p. 334.) And so in like manner you will deal with such finally confirmed claims when application may be made within ten months next succeeding the act of final confirmation, and in either class of cases make the approved returns of survey which are required by law as the bases of patents.

When, however, in any case falling within the above-mentioned classes the requisite application is not made within the period of limitation fixed in this statute, the law makes it your duty, thereafter, to extend the lines of the public surveys over such claims, and to "set off in full satisfaction of such grants, and according to the lines of the public surveys, the quantity of land confirmed in such final decree, and as nearly as can be done in accordance with such decree," taking care to observe the provision in this section as to non-interference "with the right of *bona fide* pre-emption claimants."

You will immediately ascertain in what claims of the first class surveys have not been applied for, and cause notice to be promptly served upon the parties interested, of the requirements of the law, which it is your duty to carry out. And in like manner you will timely bring to the notice of parties where claims may hereafter be finally confirmed, the stipulation of the statute fixing a limitation as to time within which confirmees must apply for a specific survey, in default whereof the location must be adjusted according to the lines of the public surveys.

The ninth section provides for appeals to the circuit court from the decision of the United States district court, approving or correcting survey.

You will be careful, in making your final returns for patenting, to show in your certificates whether the survey has been finally acted upon by the United States Supreme Court or the circuit court, and if appeal has not been taken from the decree of the district court, and the period for appeal has expired, you will send up with your returns of survey, as the basis of patent, a certificate from the clerk of the proper court, showing that the decree of confirmation has become final and absolute, no appeal having been taken within the limitation fixed by the statute. You are requested to acknowledge the receipt of these instructions.

Very respectfully, your obedient servant,

JOS. S. WILSON,  
*Commissioner.*

L. UPSON, Esq.,  
*U. S. Surveyor General, San Francisco, California.*

### *Panoche Grande Rancho and New Idria Mining Company.*

No private land claim in California has perhaps been the subject of more controversy in the courts, Executive Departments, and Congress, than that known as the "Panoche Grande or McGarrahan claim," and in connection with it a claim of the New Idria Mining Company. The matter has recently been the subject of two elaborate and exhaustive opinions rendered by the Hon. W. H. Smith, Assistant Attorney General, which have been concurred in by the Department, and as these opinions so clearly set forth the facts in these cases, and as the principles enunciated are important in the adjudication of similar claims, it is deemed proper to insert them in full, as follows:

DEPARTMENT OF JUSTICE, OFFICE OF ASSISTANT ATTORNEY GENERAL,  
*Washington, July 20, 1871.*

SIR: I have carefully examined the application of Wm. McGarrahan to have the record in the General Land Office restored to the condition it was in prior to July 1, 1870. Before I proceed to consider it, I will give a concise history of this celebrated McGarrahan claim.

March 13, 1844, one Vicente Gomez presented to Micheltorena, then governor of California, a petition praying the governor to grant to the petitioner "the place known by the name of Panoche Grande, bounded on the north by Don Julian Ursua; on the south by the Serriania, (mountain range;) on the east by the Valley de los Tulares; and on the west by Don Francisco Arias; which tract of land contains three square leagues, a little more or less, as shown by the map, which in due time I will present more correctly drawn than the one now presented."

The governor directed the Secretary of State to make the necessary investigations and to report the result.

The Secretary of State, Manuel Jimeno, sent the petition to the first justice of San Francisco, the 14th of March, 1844.

The justice, José Antonio Rodríguez, reported March 20, 1844, that the land was vacant, and that there was no reason why the petition should not be granted.

Gómez alleged that a grant had been made to him, and that his papers were deposited in a building in Monterey, and that the building was taken possession of by the United States troops in July, 1846, and that most of the papers were lost or destroyed.

By the treaty of Guadalupe Hidalgo, of February 2, 1848, it was provided that Mexicans established in California might retain their property, and that the United States should pass such laws as might be necessary to give effect to the stipulations of the treaty.—(9 U. S. Stats., 929, treaty, articles 8 and 11.)

By the act of Congress of March 3, 1851, a board of land commissioners was authorized to ascertain and settle land claims in California, subject to an appeal (provided for elsewhere) to the United States district court, with a right of final appeal to the Supreme Court of the United States within five years from the time of making decree.

On the 9th of February, 1853, Gómez, by Pacificus Ord, his attorney, filed his claim for Panoche Grande before the board of commissioners.

On the 6th of March, 1855, the board rejected the claim. The following is a copy of their decision:

"Vicente Gómez v. The United States, No. 569; claim for a place called Panoche Grande, containing four square leagues, situate in the county of Monterey. The petitioner in this case states in his petition that he had a grant for the above-named place, issued in the year A. D. 1844, by Governor Micheltorena, and that the grant was among the archives of the State, in Monterey, at the time that the archives fell into the hands of the Americans, in July, 1846, and that it was either lost or destroyed. He has also given satisfactory proof of the existence and loss of the grant, but has failed entirely to offer any proof whatever going to show that he ever occupied, improved, or cultivated any part of the land, or that he ever saw the land. We are, therefore, of the opinion that the claim is invalid, and a decree rejecting the same will be entered. Rejected."

While the case was pending before the board, Ord was appointed United States district attorney for the southern district of California. Gómez appealed from the decision of the board to the district court of the northern district of California.

Ord procured a transfer of the case from the northern to the southern district on the ground that the land lay in the southern district.

Gómez, on the 24th of November, 1856, conveyed one-half of the tract to Ord for the nominal consideration of one dollar.

After the appeal the Supreme Court of the United States in the case of *Fremont vs. United States*, (17 How., 542,) decided that possession was not necessary to the validity of a Mexican grant.

On the 5th of June, 1857, Ord handed the record to Hartman, an attorney, and informed him it was a case in which there was no dispute, and requested him to move the court to reverse the decision of the board and confirm the title. He did so. Ord informed the court that the United States had no objection, and thereupon the court, without investigation or argument, ordered the title to be confirmed. The court omitted to sign the decree.

On the 22d of December, 1857, Gómez conveyed Panoche Grande to McGarrahan, subject to the interest of Ord in the same. The consideration stated in the deed was seven hundred dollars, (\$1,100.)

On the 8th of February, 1858, the decree was signed and entered *nunc pro tunc*.

It appears that an appeal was docketed and dismissed in the Supreme Court at the December term, 1858, and that the decree of dismissal was set aside and mandate revoked at the December term, 1859, of the same court. This last case is reported in 23 Howard, 326.

On the 21st of March, 1861, the district court (Judge Ogier) on motion set aside all proceedings before that had in his court, on the ground that the decree had been obtained by fraud, and directed that the cause be put on the calendar and set for trial *de novo*.

On the 4th of August, 1862, Judge Ogier having died, his successor, Judge Haight, on application of claimant, set aside the order of Judge Ogier, last named.

An appeal was then regularly moved for and allowed on the part of the United States. The claimant then moved to set aside the order of appeal on the ground that five years had elapsed from the date of the decree, which he contended was June, 1857; the decree of the 5th of February, 1858, having been entered *nunc pro tunc*, as of June, 1857.

December 3, 1862, Judge Haight sustained this view and set aside the order of appeal.

December term, 1863, the Supreme Court overruled Judge Haight, and held that the order of appeal was in time. *Gómez vs. United States*, (1 Wall., 690.)

In the meantime, and on the 29th of December, 1862, Caleb B. Smith, then Secretary of the Interior, ordered the Commissioner of the General Land Office to issue a patent

"in the location of the said claims" it confers the "same power and authority" on the surveyor general as the register and receiver have by the sixth section of the act of 3d March, 1831, (see 4th vol. U. S. Stats., page 494,) which is as follows:

"SEC. 6. *And be it further enacted*, That in relation to all such confirmed claims as may conflict, or in any manner interfere with each other, the register of the land office and receiver of public moneys for the proper land district are hereby authorized to decide between the parties, and shall, in their decisions, be governed by such conditional lines or boundaries as have been or may be agreed upon between the parties interested, either verbally or in writing; and in case no lines or boundaries be agreed upon between the parties interested, then the said register and receiver are hereby authorized to decide between the parties in such manner as may be consistent with the principles of justice; and it shall be the duty of the surveyor general of the said State to have these claims surveyed and platted in accordance with the decisions of the register and receiver."

Now, the thirteenth section of the act of 3d March, 1851, merely strikes out register and receiver, and substitutes surveyor general, in matters of conflict in California. You have, then, the power which is delegated to you respecting California claims very plainly pointed out and defined in the statute as above quoted. Whenever, therefore, you have before you for survey claims which conflict, you will, before proceeding to field operations, make a call in writing upon the several claimants to file with you an authentic showing of the "conditional lines or boundaries" which may have been or may be agreed upon between them. You will fix the period for a reply, affording a reasonable time, and in default of the desired showing you will, in virtue of the authority expressly delegated to you by the statute, "decide between the parties in such a manner as may be consistent with the principles of justice;" you will then cause a return of survey to be made, exhibiting on the plat of survey, therewith connected by black lines, the exact limits, according to the final decree of confirmation, and in red ink, the conditional lines where agreed upon, or in default of such conditional lines, those lines which you shall adjudge to be those of the survey of the tract, which shall be carried into patent, in the words and figures of the field-notes, which must accompany the finally approved survey. In any case where a survey under a decree of final confirmation shall fall wholly within the limits of another, the grade of title and date of confirmation will, as a matter of course, be the essential data in determining as to which will take precedence, but in any case of that character you should make a full report of all the facts, with illustrative diagrams and your own decision thereon, notifying the claimants of its purport, and then await the ultimate decision of the Department.

Previous to 2d June, 1862, the surveys of private land claims were paid for by the United States, but an act of that date was passed entitled "An act for the survey of grants or claims of land," by which it is provided as follows:

That all claims or grants of land in any of the States or Territories of the United States, derived from any foreign country or government, shall be surveyed under the direction of the proper officers of the Government of the United States, upon the application of the parties claiming or owning the same, and at their expense, when shall be paid or secured to the satisfaction of the Secretary of the Interior before the work shall be performed; but nothing in the law requiring the executive officers to survey land claimed or granted under any laws of the United States shall be construed either to authorize such officers to pass upon the validity of the titles granted by or under such laws, or to give any greater effect to the surveys made by them than to make such surveys *prima facie* evidence of the true location of the land claimed or granted, nor shall any such grant be deemed incomplete for the want of a survey or patent, when the land granted may be ascertained without a survey or patent.—(Stats., vol. 12, p. 410.)

This act was repealed by the act approved February 18, 1871, (vol. 16, p. 416,) but with the proviso "that the repeal of said act shall not affect any rights heretofore acquired under the same." Another law however, which stands unrepealed, (the act of May 30, 1862, Stats., vol. 12, page 409, sec. 3,) provides that "an accurate account shall be kept by each surveyor general of the cost of surveying and platting private land claims, to be reported to the General Land Office, with the map of such claim, and that patents shall not issue for any such private claim until the cost of survey and platting shall have been paid into the Treasury of the United States by the claimant;" and the sixth section of the act of July 1, 1864, (Stats., vol. 13, page 332,) provides that

"each claimant requesting a survey and plat shall first deposit in the district court of the district within which the land is situated a sufficient sum of money to pay the expense of such survey and plat and of the publication required by the first section of this act," so that payment of survey by the claimant of any private land claim is still a requisite of the law. In view of the guarantees of the treaty of Guadalupe Hidalgo to protect and maintain the Mexicans incorporated into the Union of the United States in the "free enjoyment of their liberty and property," with the privilege of "retaining the property which they possess in the" territory acquired by that treaty, "or disposing thereof and removing the proceeds wherever they please, without their being subjected on this account to *any contribution, tax, or charge whatever*," and in view of the further fact that it is quite as essential to the Government as to the individual that a separation of the private from the public lands should be made, it is suggested that all the provisions of existing laws which require payment to be made by the claimant for the survey and platting of private land claims under treaties with foreign governments should also be repealed.

Surveys under the act of March 3, 1851, were subject to the jurisdiction and control of the Commissioner of the General Land Office, subordinate to the Secretary of the Interior. The surveyor general caused the surveys to be executed. If deemed correct he approved them, and if found satisfactory to this office patents were issued. If excepted to by the parties interested, the case came by appeal, first to this office, and finally before the Secretary of the Interior, whose judgment was final.

By the act of Congress approved June 14, 1860, (U. S. Stats., vol. 12, page 33,) jurisdiction was given to the Federal judiciary upon surveys approved by the surveyor general subsequent to its passage. The act provided that whenever the surveyor general of California should, in compliance with the thirteenth section of the act of March 3, 1851, "have caused any private land claim to be surveyed and a plat to be made thereof, he shall give notice that the same has been done and the survey and plat approved by him, by a publication once a week for four weeks in two newspapers, one published in the city of San Francisco, and one of which the place of publication is nearest the land, if the land is situated in the northern district of California; and once a week for four weeks in two newspapers, one published at Los Angeles, and one of which the place of publication is nearest the land, if the land is situated in the southern district of California; and until the expiration of such time, the survey and plat shall be retained in his office subject to inspection." Said act further provided that surveys so made could be brought before the Federal judiciary either by the claimants, upon application by them in the manner prescribed by the statute and under an order of court, or by the United States on motion of the district attorney, founded on sufficient affidavits, and the United States courts had authority finally to adjudicate questions of survey.

The fifth section of said act provided "that when, after publication as aforesaid, no application shall be made to the said court for the said order, or when said order has been refused, or when an order shall have been obtained as aforesaid, and when the district court by its decree shall have finally approved said survey and location, or shall have reformed or modified the same and determined the true location of the claim, it shall be the duty of the surveyor general to transmit, without delay, the plat or survey of the said claim to the General Land Office, and the patent for the land as surveyed shall forthwith be iss

Committee of the House of Representatives that they had no personal knowledge on the subject, and did not know that the statements of their certificate of July 25, 1870, were true, and the testimony of other parties connected with the Land Office has been taken before the same committee for the purpose of showing how it was that the record came to be made before the patent had been executed, and that in point of fact the patent never was executed.

June 15, 1871, McGarrahan presented to the Secretary of the Interior a petition reciting the history of the patent as recorded, and alleging that the patent was executed and recorded, and that "Secretary Cox ordered that the record of my (his) patent be destroyed, which was accordingly done on the 25th of July, 1870," and he asks that the Secretary "will be pleased to advise the President to order the restoration of the record of my (his) patent upon the records of the Land Office to the same condition in which it was placed by the decision of President Lincoln, and Secretaries Smith and Usher, and to remove the unauthorized and illegal erasures made on it by direction of Mr. Cox, and that an exemplified copy of this unmutated record be delivered to me (him)."

I have given thus briefly the entire history of this case, except the action of Congress, and will now proceed to state the conclusions to which I have arrived.

The eighth section of the act of April 25, 1812, (2 Stats., 717,) provided that "all patents issuing from the said office shall be issued in the name of the United States, and under the seal of the said office, and be signed by the President of the United States, and countersigned by the Commissioner of the said office, and *shall be recorded* in the said office in books to be kept for the purpose."

The duty of countersigning was afterwards imposed upon the Recorder instead of the Commissioner. (5 Stats., 417.)

It was the legal duty of the Commissioner to record all patents that had been issued under the seal of his office, signed by the President, and from the fact of such record the law presumes that the patent had been duly signed by the President.

In *The United States vs. Daudrige*, (12 Wheat., 69,) the Supreme Court said: "By the general rules of evidence presumptions are continually made in cases of private persons of acts even of the most solemn nature, when these acts are the natural results or necessary accompaniment of other circumstances. In aid of this salutary principle the law itself, for the purpose of strengthening the infirmity of evidence and upholding transactions intimately connected with the public peace, and the security of private property, indulges its own presumptions. It presumes that every man in his private and official character does his duty until the contrary is proved; it will presume that all things are rightly done, unless the circumstances overturn this presumption according to the maxim *omnia presumuntur rite et solemniter esse acta donec probetur in contrarium*. Thus it will presume that a man acting in a public office has been rightly appointed; that entries found in public books have been made by the proper officer; that upon proof of title, matters collateral to that title shall be deemed to have been done. The books on evidence abound with instances of this kind."

In accordance with this settled rule the presumption is that the patent was duly signed. But it is only a presumption, and may be overcome by proof.

In *Lea vs. Polk County Copper Company*, (21 Howard, 494,) the facts were these:

A patent from the State of Tennessee had issued to William Park Lea. It was signed by the governor, countersigned by the secretary of state, and sealed with the great seal of the State. As originally filled out before signature, it was in the name of William P. Lea, and was altered to William Park Lea by adding the letters "ark" to the P. This was done by the register of the land office, whose duty it was to prepare the patent for the signatures of the governor and secretary.

There was a William Pinkney Lea, and he and William Park Lea wrote their names William P. Lea, the former always, and the latter generally, although he sometimes signed William Park Lea. Both had entered lands, and the register added the letters "ark" to distinguish between them. It was claimed that William Pinkney Lea was the party whose name should have been in the patent. The court, in disposing of the case, said: "Then the presumption comes in that, as a public officer, the register did his duty, and he who impeaches the act as illegal *must prove the allegation*. On this assumption the register filled up the patent, as it is now found, before the governor signed it, and the seal of the State was attached; that is to say, when the patent bears date. Then, again, all the incipient steps authorizing the register to issue the grant, the governor to sign it, and the secretary to attach the great seal, are *presumed as having been regular*; nor was the purchaser required to look behind the patent." (*Baywell vs. Broderick*, 13 Pet., 446.)

This case is a clear admission by the Supreme Court that the actual facts in reference to a patent may be shown, and that, if necessary, the record may be contradicted and corrected. But how, and by whom? Shall it be in the Department where it originated, or must it be in court? Obviously, *when the patent has not been delivered*, it would be much more convenient, and certainly more expeditious, less expensive, and equally safe, to have the correction made in the Department, and under the supervision and

control of the Secretary of the Interior, who is selected on account of his high character. If the Secretary had personal knowledge that the record was untrue, and the error had arisen during his term of office, it is clear that he would have the power, and it would be his duty, to make the record speak the truth. Is it any the less his duty, if the error occurred before his term, provided he is *fully satisfied* there is such error, although he may not have personal knowledge on the subject?

It seems to me that personal knowledge is not essential. In the various subjects that necessarily arise in one of the Departments, it is utterly impossible that the Secretary can have personal knowledge of them all. He must trust to those who are under his charge, and it is proper for him to rely on their statements, when he knows that they are credible and worthy persons. In so grave a matter as altering the record of a patent, he should act with extreme caution, and after diligent inquiry.

In the case now under consideration Secretary Cox has acted upon evidence that was satisfactory to him. If he had jurisdiction, (which I think he had,) and erred in his conclusions, it is settled by multiplied decisions of the Attorneys General that you, as his successor, have no power to reverse him. See opinion of Mr. Wirt, (2 Op., 9;) of Mr. Taney, (2 Op., 464;) of Mr. Nelson, (4 Op., 341;) of Mr. Toucey, (5 Op., 29;) of Mr. Johnson, (5 Op., 123;) of Mr. Black, (9 Op., 101, 301, 387;) of Mr. Stanbery, (12 Op., 551) of Mr. Hoar, of April 26, 1869, and of Mr. Akerman, of March 7, 1871; also United States vs. Bank of Metropolis, (15 Pet., 401.)

In view of these authorities, if I differed with Secretary Cox as to the weight of the evidence, I should not feel justified in advising a reversal by you of what he had done; but I do not differ with him. In my opinion, after careful examination of all the light now shed upon the question, *the patent for Panoche Grande was not executed by the President*. Entertaining these views, I must advise adversely to the prayer of McGarrahan.

Very respectfully,

W. H. SMITH,  
*Assistant Attorney General.*

Hon. C. DELANO,  
*Secretary of the Interior.*

DEPARTMENT OF THE INTERIOR,  
*Washington, D. C., August 4, 1871.*

SIR: I have examined the application of the New Idria Mining Company for the issuing of a patent for 480 acres of mineral lands in California, and am of opinion that the same should be rejected.

Some of the necessary steps in the case were taken in direct violation of the orders of the proper officer in the Interior Department.

The evidence is defective in not showing that the proper notice and diagram were posted up on the premises, and in not identifying the claims alleged in the petition and advertisement.

There is no sufficient proof of the citizenship of the claimants, and the amount of and claimed exceeds that authorized by law.

I inclose a copy of the opinion of Assistant Attorney General Smith in the case. I concur with him in the conclusion that the claim should be rejected. You will take the proper steps to carry this decision into effect.

The papers transmitted with your letter of 17th September, 1870, are herewith returned.

I am, sir, very respectfully, your obedient servant,

B. R. COWEN,  
*Acting Secretary.*

Hon. WILLIS DRUMMOND,  
*Commissioner General Land Office.*

DEPARTMENT OF JUSTICE,  
OFFICE ASSISTANT ATTORNEY GENERAL,  
*Washington, July 21, 1871.*

SIR: I have examined with care the application of the New Idria Mining Company for the issuing of a patent for 480 acres of mineral lands in townships seventeen and eighteen south, range twelve east, Mount Diablo meridian, California. This company was incorporated on the 25th of January, 1858, under a general law of the State of California, with a capital stock of \$23,000, divided into one hundred and fifteen shares, among eleven shareholders. It was to continue fifty years, have its principal place of business at San Francisco, and be governed by a board of five trustees. It filed its application and diagram in the local land office on the 6th day of February, 1867. The application alleged that the New Idria Mining Company was the owner of the mining claim known as the New Idria, situate in the San Carlos district, Fresno county, California; that it claimed a vein or lode of cinnabar and other minerals, and had occupied and improved the same under the names of the Molina, San Carlos, and New Idria mines.

officer were material steps in making out the claim of the New Idria Company for the land in question, and I submit that to approve of them now as regular and valid would be a species of self-stultification not complimentary to the Interior Department, and not calculated to promote the just administration of the public business of subordinate officers.

2. There is no evidence that a proper notice or diagram was posted on the claim. The affidavits that have been filed do not describe the notice or diagram, and do not state when they were posted up. Whether they were sufficient in law or not I am unable to say. The applicant should have proved just what the notice and diagram were, and when they were posted on the claim. The third section of the act of July, 1866, requires that such notice and diagram shall be posted in a conspicuous place on the claim. As the method of acquiring mineral lands is a special statutory proceeding, the statute should be carefully followed.

3. The notice published in the Monterey Gazette describes the companies who are making the application as the Morning Star, the New Idria, and the Victorina, whereas the New Idria Mining Company, in their application, describe them as the Molina, the San Carlos, and the New Idria. Now it may be that the Morning Star and the Molina are identical, and that the San Carlos and the Victorina are identical, but if they are, there is no proof of the fact on file in this case. The published notice should agree in description with the application, and if it does not, the applicant has failed to comply with the statute.

4. The second section of the act of July 26, 1866, reads as follows:

"That whenever any person or association of persons claim a vein or lode of quartz, or other rock in place, bearing gold, silver, cinnabar, or copper, having previously occupied and improved the same according to the local customs or rules of miners in the district where the same is situated, and having expended in actual labor and improvements thereon an amount of not less than \$1,000, and in regard to whose possession there is no controversy or opposing claim, it shall and may be lawful for said claimant or association of claimants to file in the local land office a diagram of the same, so extended laterally or otherwise as to conform to the local laws, customs, and rules of miners, and to enter such tract and receive a patent therefor, granting such mine, together with the right to follow such vein or lode with its dips, angles, and variations, to any depth, although it may enter the land adjoining, which land adjoining shall be sold subject to this condition."

It will thus be seen that the "vein or lode of quartz, or other rock in place, bearing gold, silver, cinnabar, (quicksilver,) or copper, to which a patent can be obtained, is one which has been previously occupied and improved according to the local customs or rules of miners in the district where the same is situated, and on which not less than \$1,000 have been expended in actual labor and improvements, and also one "in regard to whose possession there is no controversy or opposing claim."

Congress had the power to make such qualifications in granting mineral lands as it saw fit. It chose to say that no such lands should be patented unless they were those that were free from all questions relating to the possession. Not content with saying that the possession should be free from controversy which might imply active assertion of right by proceedings in court or otherwise, it did say that the mines shall be free from all opposing claims. That is to say, no patent shall issue for any mineral lands about which any one, other than the petitioner, asserts any right of possession, and a controversy must relate to possession, for title is in the Government, and therefore cannot be in question. Stronger language could not well be used.

If we look into the history of these New Idria mines, we shall find that there has been a continuous, persistent, and bitter contest in regard to them from the outset, and up to the present time. William McGarrahan has sought by suits in ejectment, and otherwise, and by congressional action, to possess himself of these identical premises. He is now before your Department, and has been for the last ten years.

If this second section were the only provision on this subject, I should entertain no doubt but that this controversy and opposing claim of McGarrahan was fatal to the application now made. But it may be, in view of the provisions of the third section, relating to an "adverse claim," and the manner of presenting it, that the true meaning of the second section is, that there must be no controversy or opposing claim at the time of the final hearing and the issuing of patent. If this be the true construction, and I am inclined to think it is, it may be that this objection is not well taken, as I understand the McGarrahan claim has been virtually rejected by your Department. At all events the question is not free from doubt.

5. The first section of the act of July 26, 1866, provides, "That the mineral lands of the public domain, both surveyed and unsurveyed, are hereby declared to be free and open to exploration and occupation by all citizens of the United States, and those who had declared their intention to become citizens, subject to such regulations as may be prescribed by law, and subject also to the local customs or rules of miners in the several mining districts, so far as the same may not be in conflict with the laws of the United States." In other words, the only parties entitled to the benefits of this act are



## "NOTICE.

"The undersigned give notice that they intend to apply for a patent for the vein or lode set forth in the diagram and notice posted on the claim, and filed in the U. S. land office, San Francisco, called the Morning Star, situated in the San Carlos district, county of Fresno, State of California.

"Dated this 1st day of February, 1867.

"THE NEW IDRIA MINING CO.,

"By WM. H. L. BARNES,

"Feb. 8-3m."

"President.

## "NOTICE.

"The undersigned give notice that they intend to apply for a patent for the vein or lode set forth in the diagram and notice posted on the claim, and filed in the U. S. land office, San Francisco, called the Victorina, situated in the San Carlos district, county of Fresno, State of California.

"Dated this 1st day of February, 1867.

"THE NEW IDRIA MINING CO.,

"By WM. H. L. BARNES,

"Feb. 8-3m."

"President.

## "NOTICE.

"The undersigned give notice that they intend to apply for a patent for the vein or lode set forth in the diagram and notice posted on the claim, and filed in the U. S. land office, San Francisco, called the New Idria, situated in the San Carlos district, county of Fresno, State of California.

"Dated this 1st day of February, 1866. (P)

"THE NEW IDRIA MINING CO.,

"By WM. H. L. BARNES,

"Feb. 8-3m."

"President.

A notice and diagram were posted on the claim for ninety days, but what that notice and diagram were, and when the ninety days commenced, is not shown in the case.

The survey was made on the 6th and 7th days of June, 1867, by James T. Stratton, United States deputy surveyor, and approved by L. Upson, surveyor general of California, on the 22d day of June, 1868.

The papers in the case were forwarded by the register to the Commissioner of the General Land Office on the 29th of July, 1868, and received by him on the 12th of August, 1868. Among these papers was a certified copy of the local laws, adopted by the miners of the San Carlos district on the 4th of December, 1854, by which it was provided that a discoverer of quicksilver or silver mines should be entitled to 160 acres, to be so located that the mine or vein should be situate on the same.

Having made this preliminary statement, I will proceed to consider the questions which arise in the case, some of which are purely technical, and others are substantial and important, and affect the merits.

1. It appears from the papers on file that the clerk of the Judiciary Committee of the House of Representatives, on the 1st of April, 1867, transmitted to the Commissioner of the General Land Office a joint resolution (H. R. 45) directing the Secretary of the Interior to "withhold the issuing of any patent, and to permit no proceedings in his Department affecting the title to the tract of land known as the Rancho Panoche Grande in the counties of Monterey and Fresno, in California, until the claim thereto now pending in Congress shall have been disposed of."

On the 17th of April, 1867, the surveyor general of California and the register and receiver of the proper district were instructed, as suggested by said joint resolution, and these instructions were repeated May 23, 1867, February 1, 1868, and August 17, 1868.

The New Idria Mining Company was advised of these instructions, and yet, notwithstanding the same, at the request and at the instigation of the company, the surveyor general caused the premises to be surveyed on the 6th and 7th days of June, 1867, and approved the plat thereof on the 22d of June, 1868, and the register forwarded the case to the office of the Commissioner of the General Land Office on the 29th of July, 1868, although the aforesaid instructions were still in force and had never been reversed. Their action seems to have been in accordance with an opinion given by Delos Lake, esq., then United States district attorney of California. They were not officers under the district attorney, but were officers under the superintendence of the Secretary of the Interior. The acts that were thus done against the express direction of the proper

There has grown up in the United States courts a rule which treats a corporation for the purpose of suing and being sued as a citizen. This rule has been adopted for convenience in practice. At first it was held that where there were two or more plaintiffs, and two or more defendants, each plaintiff be capable of suing each defendant, in order to support the jurisdiction of the court. (*Strawbridge vs. Curtis*, 3 Cranch, 267.) The same court held that a corporation aggregate, comprised entirely of citizens of a State, may sue a citizen of another State in the circuit court of the United States. And further, that a corporation aggregate cannot in its corporate capacity be a citizen.

*Bank of United States vs. Deveaux*, (5 Cranch, 84.) Chief Justice Marshall said, "The jurisdiction of this court being limited, so far as respects the character of the parties in this particular case, to controversies between citizens of different States, both parties must be citizens to come within the description. That invisible, intangible, and artificial being, that mere legal entity, a corporation aggregate, is *certainly not a citizen*, and consequently cannot sue or be sued in the courts of the United States, unless the rights of the members in this respect can be exercised in their corporate name. If a corporation be considered as a mere faculty, and not as a company of individuals, when in transacting their joint concerns, may use a legal name, they must be excluded from the courts of the Union."

The court held that the corporation could sue and be sued if all its stockholders were citizens of the State where the suit was pending. The same principle was afterwards decided in the *Commercial Bank of Vicksburg vs. Slocum et al.* (14 Pet., 60.)

The Supreme Court, in *Louisville Railroad Company vs. Letson*, (2 How., 550,) went a step further, and held that a citizen of one State can sue a corporation which has been created by and transacts its business in another State where the suit was brought, although some of the members of the corporation were not citizens of the State where the suit was brought. Judge Wayne, in delivering the opinion of the court, said: "A corporation created by a State to perform its functions under the authority of that State, and only *suable there*, though it may have members out of the State, seems to us to be a person, though an artificial one, inhabiting and belonging to that State, and therefore entitled, for the purpose of suing and being sued, to be deemed a citizen of that State."

And again: "We confess our inability to reconcile these qualities of a corporation—residents, habitancy, and individuality—with the doctrine that a corporation aggregate cannot be a citizen for the purposes of a suit in the courts of the United States, unless in consequence of a residence of all the corporates being of the State in which the suit is brought."

In *Marshall vs. Baltimore & Ohio Railroad Company*, (16 How., 327,) Judge Grier said: "A corporation, it is said, is an artificial person, a mere legal entity, invisible and intangible. This is, no doubt, metaphysically true in a certain sense. The inference, also, that such an artificial entity cannot be a citizen, is a logical conclusion from the premises which cannot be denied. But a citizen who has made a contract, and by a 'controversy' with a corporation may also say, with equal truth, that he did not deal with a mere metaphysical abstraction, but with natural persons; that his writ has not been served on an imaginary entity, but on men and citizens; and that his contract was made with them as the legal representatives of numerous unknown associates or secret and dormant partners."

In *Covington Drawbridge Company vs. Shepherd*, (20 How., 233,) Chief Justice Taney said: "In the case of *Lafayette Insurance Company vs. French*, the declaration stated that the corporation itself was a citizen. Now, no one, we presume, ever supposed that the artificial being created by an act of incorporation could be a citizen of a State in the sense in which that word is used in the Constitution of the United States, and the averment was rejected because the matter averred was 'simply impossible.'"

I have cited these passages for the purposes of showing how the judicial mind has treated this question, and how uniformly it has been held that the quality of citizenship was given to a corporation from the necessity of the case, and for the purpose of allowing it to sue and be sued, and for that alone, and that a corporation was in no sense a citizen within the meaning of that term as used in the Constitution or in the laws relating to the public lands.

If a corporation is a citizen within the meaning of the act of 1866, then foreigners, for example, the Chinese, may flood this country, organize themselves into corporations—a thing that is easily done under general laws—and absorb every acre of the mineral lands. A construction that leads to such consequences does not commend itself to my mind. I am of opinion that the New Idria Mining Company have not shown such citizenship as entitles them to a patent.

6. The fourth section of the act of July, 1866, is in these words: "That when such location and entry of a mine shall be upon unsurveyed lands, it shall and may be lawful, after the extension thereto of the public surveys, to adjust the surveys to the limits of the premises according to the location and possession and plat aforesaid, and the surveyor general may, in extending the surveys, vary the same from a rectangular form to suit the circumstances of the country and the local rules, laws, and customs of

where: *Provided*, That no location hereafter made shall exceed two hundred feet in length along the vein for each location, with an additional claim for discovery to the discoverer of the lode, with the right to follow such vein to any depth, with all its dips, variations, and angles, together with a reasonable quantity of surface for the convenient working of the same as fixed by local rules: *And provided, further*, That no person may make more than one location on the same lode, and not more than three thousand feet shall be taken in any one claim by any association of persons."

The last proviso of this section limits the quantity of land that can be appropriated by any one association to three thousand feet.

It is true that under the local rules adopted for the San Carlos district, in 1854, a person was allowed to take up 160 acres, but that rule must give way to a statutory one which conflicts with it. This is carefully provided for in the first section. It declares that the mineral lands may be occupied "subject to such regulations as may be prescribed by law, and subject also to the local customs or rules of miners in the several mining districts so far as the same may not conflict with the laws of the United States."

Now, the local law says that in mining for cinnabar, the miner may appropriate 160 acres. The statute of the United States says that "not more than three thousand feet shall be taken in any one claim, by an association of persons." The statute must control.

The New Idria Mining Company claim to be the assignees of three different associations—the Molino, the San Carlos, and the New Idria.

The Molino mine was located March 21, 1854, by E. Repa, José D. Molina, H. F. Pitts, and William Mulin. The lands claimed are described as follows: "Situated in the county of Mariposa, State of California, and inclosed within the following limits: Beginning one mile and a half northeast of the Aurora Silver mine, at a stake marked A, No. 1; thence south 200 yards, to a stake marked B, No. 2; thence west 300 yards, across an arroyo to a tree marked C, No. 3; thence north 210 yards, to a stake marked D, No. 4; thence east 300 yards, across the above-mentioned arroyo to the point of beginning." This would give an area of 12.38 acres. The interest of all these parties has been duly conveyed to the New Idria Mining Company.

The San Carlos mine was located November 22, 1854, by H. F. Pitts, P. Collins, T. Smith, James Preffo, T. M. Murales, R. B. Hampton, D. W. Gomez, John Young, A. Ballard, and H. G. Ballenger. The lands claimed are described as follows: "Situated in the county of Mariposa, and State of California, and inclosed within the following limits: Beginning two miles south of the Aurora Silver mine, at a stake marked X; thence east to a stake marked B, 230 yards; thence southeast 500 yards to a stake marked D; thence southwest 230 yards to the point of beginning." This would be an area of 28.76 acres. These parties have conveyed to the New Idria Mining Company.

The New Idria mine was located December 13, 1854, by H. F. Pitts, P. Collins, and E. G. Ballenger. In their declaration of location they say that "they claim by right of discovery, as well as by right of possession, for a long time past, the quicksilver mine which, as subdivided, is known as the 'New Idria,' 'Molino,' and 'San Carlos,' quicksilver mines, being bounded as follows: Beginning on the southeastern slope of Mount Carlos, county aforesaid, at a stake and stones erected there for a boundary, and marked as per subjoined plat of survey, No. 1; thence running N. 5° E. 15 chains to a stake and stones, No. 2; thence at right angles N. 45° W. 220 chains to a stake and stones, No. 3; thence at right angles S. 45° W. 30 chains to a stake and stones, No. 4; thence at right angles S. 45° E. 220 chains to a stake and stones, No. 5; thence at right angles N. 45° E. 15 chains, to the place of beginning." This would give an area of 660 acres. These parties have conveyed to the New Idria Mining Company.

Granting that associations may assign, and that the assignee may hold to the same extent that the several assignors might, and this company would now be entitled to land not exceeding nine thousand feet in length. Neither the Molino nor the San Carlos ever located on or claimed 160 acres. The Molino's location only covered a tract only 300 yards, and amounting to a little over 12 acres; and the San Carlos, a strip only 500 yards, and amounting to a little over 28 acres.

The New Idria claimed to locate a large tract of some 660 acres, covering both of the other companies. It does not appear that either the Molino or San Carlos ever claimed or took any steps towards securing any more land than they actually located.

The New Idria now claim 480 acres, being 160 acres for each of the three associations that have assigned to them. In view of the express terms of the statute, I do not see how they can make good any such claim. Congress certainly did not intend to provide that all new claims originating after the passage of the act should be limited to the three thousand feet for each association, but that all claims originating before its passage should be entitled to 160 acres for each association. That would be offering a reward to those who had become trespassers, and were liable to prosecution, and discriminating in their favor as against those who had in all respects complied with the law.

This case has been pending many years and has been represented by eminent coun-

sel, and it is safe to say has been presented as favorably for the company as the facts will allow.

I must advise adversely to the issuing of a patent as claimed.

Very respectfully,

Hon. C. DELANO,  
*Secretary of Interior.*

W. H. SMITH,  
*Assistant Attorney General.*

DEPARTMENT OF THE INTERIOR,  
*Washington, D. C., August 4, 1871.*

SIR: I have considered your application of 15th June last, requesting me to advise the President to direct that the certificate should be erased and canceled which had been written by order of Secretary Cox across the last page of the General Land Office record of the patent for the premises called "Panoche Grande." I must decline to grant your request. In my opinion the Secretary of the Interior has power to correct the record of a patent at any time before its delivery, and perhaps afterward, so as to make it correspond with the facts; this power is not limited to cases of which he has personal knowledge, but he may act upon the statements and evidence of his trusted subordinates, and upon matters that took place before he became Secretary.

Secretary Cox having acted upon the subject now before me, I regard his action as conclusive and beyond my power of revision or reversal, even though I should differ with him as to the facts.

But I do not differ with him. I think the weight of the evidence shows that the patent was not executed by the President.

I inclose a copy of the opinion of Assistant Attorney General Smith, on the subject, and agree with him in the conclusions at which he arrived.

Very respectfully,

B. R. COWEN,  
*Acting Secretary.*

WM. MCGARRAHAN, Esq.,

*Private land claims in New Mexico, Colorado, Arizona, and territory other than California, acquired under the treaty of Guadalupe Hidalgo and the Gadsden purchase.*

Special attention is invited to the subject of Spanish and Mexican land titles in that part of the national domain acquired by the treaty of Guadalupe Hidalgo and the Gadsden purchase, not embraced in California.

The act of Congress approved July 22, 1854, (Stats., vol. 10, p. 308,) devolved upon the surveyor general of New Mexico the duty of examining and deciding upon the validity of private land claims in that territory, and provided that his decisions should be submitted to Congress for final action in the way of confirmation or rejection. The provisions of law in that respect were extended to Colorado Territory by the seventeenth section of the act of February 28, 1861, (Stats., vol. 12, p. 176.) The statutory requirements and the surveyor general's powers and duties thereunder are shown in the subjoined instructions from this office, dated August 21, 1854, as approved by the honorable Secretary of the Interior, August 25, 1854.

In this region there are reported to be quite a number of private land claims resting upon titles which had their inception under the former government, few of which have been adjusted. In 1860 the surveyor general of New Mexico reported that there were then on his docket over one thousand claims to be examined and decided on as soon as they could be taken up, and that justice to the claimants demanded that their claims should be acted upon at the earliest moment; but a vigorous prosecution of this branch of his duties would retard the execution of public and private surveys and interfere materially with the dispatch of other official duties pressing upon him. From the report of the surveyor general of New Mexico for the current year, it appears that only fifty-five claims of this kind have been acted upon, and he believes that a much larger number remain to be filed.

citizens of the United States, and those who have declared their intention to become citizens. In my opinion none other are so entitled. In the present case there is no proof that either of the original parties who located these mines, or either of them, or that any of the subsequent owners who have conveyed to the New Idria Mining Company, were ever citizens of the United States, or had declared their intention to become such. Nor is there any proof that any of the persons who were incorporated as the New Idria Mining Company ever were such citizens or persons. The only item of proof that bears upon this point is the evidence that this company is an incorporated company under the laws of California. It is claimed that by reason of such incorporation it is a citizen of California, and therefore of the United States. From such a view of the law I must dissent.

The mineral lands within its territory belong to the United States. Congress has carefully reserved them from all grants. By the act of March 3, 1877, (2 Stat., 117,) it reserved all lead mines from land sold. It excepts them from the operation of its pre-emption and homestead laws, and from all grants to railroads and to the States. It makes the parties who enter upon them, without authority, liable to an action for damages and to a prosecution for a penalty. And when it has undertaken to dispose of them, it has granted them only to its own citizens, or those who had declared their intention to become such. Every bill introduced into Congress, purporting to dispose of mineral lands, so far as I have been able to ascertain, contained such a clause. The Fremont bill introduced into the Senate, September 10, 1880, the second day after the admission of the State of California, confined its grants to American citizens, and was amended so as to include those who had declared their intention to become citizens. (22 Cong. Globe, part 2, p. 1302.)

The Felch bill, introduced at the same session, contained the same clause.

The act of July 26, 1866, expressly so provides. Otherwise it would be in the power of foreigners, who might be inimical to the well-being and prosperity of the Government, to absorb the entire mineral wealth of the country, and turn this vast engine against its true interests.

To my mind it is clear that the privileges of exploring and occupying, and the privilege of entering the land thus explored and occupied, is given to citizens, and those who have declared their intent, and to them alone. I cannot confine this privilege, as some have done, to the first section. This view is strengthened by looking at the intent of Congress as shown in its enactments in regard to the public lands. The pre-emption act is limited in terms to "every person being the head of a family, or widow, or single man over the age of twenty-one years, and being a citizen of the United States or having filed his declaration of intention to become a citizen as required by the naturalization laws." (Act of September 4, 1841, sec. 1, 5 Stat., 455.)

The language in the homestead act is almost identical. (Act of May 20, 1862, 12 Stat., 322.) Is it to be supposed that Congress, when it has been so particular to limit the right of acquiring the public lands, *not mineral*, to citizens and those who have declared their intention, would, when it came to dispose of the most valuable of all public lands—the mineral lands—give them to anybody and everybody whether citizens or not? The idea is preposterous, and an interpretation of the section which gives such results should certainly be rejected.

The question recurs, is a corporation, created by the laws of the State of California, a citizen of the United States within the purview of this statute?

It is somewhat difficult to give an exact definition of the word citizen. It is sometimes said to be a person who, under the laws and Constitution of the United States, has a right to vote for representatives in Congress and other public officers, and also is qualified to fill offices in the gift of the people. (1 Bouv. Dict., 211.) This definition would exclude women and children. A citizen of the United States is a native-born or naturalized person of either sex, who owes allegiance to, and is entitled to protection from, the United States, or a person who is made a citizen by treaty stipulation or by constitutional or statutory law.

A corporation, says Chief Justice Marshall, in *Dartmouth College vs. Woodward*, 4 Wheaton, p. 626, is "an artificial being, invisible, intangible, and existing only in contemplation of law. Being the mere creature of law, it possesses only those properties which the charter of its creation confers upon it, either expressly or as incidental to its very existence. These are such as are supposed best calculated to effect the object for which it was created. Among the most important are immortality, and if the expression may be allowed, individuality; properties by which a perpetual succession of many persons are considered as the same, and may act as the single individual. They enable a corporation to manage its own affairs without the perplexing intricacies, the hazardous and endless necessity of perpetual conveyance for the purpose of transmitting it from hand to hand. It is chiefly for the purpose of clothing bodies of men in succession with these qualities and capacities, that corporations were invented and are in use."

From the above it is apparent that in general the terms, citizen and corporation, are distinct and have widely different signification.

five of them is either stated or estimated. They are for one league, four leagues, five leagues, 7,600 acres, and about 20,000 acres.

Whether the other claims embrace a less or greater amount is not and cannot be made known from the documentary evidence of title forwarded by the surveyor general.

The grant in each case refers to some stream, hill, mountain-top, valley, or other known natural object, for boundary.

Attention has also been drawn to this matter in reports by my predecessors nearly every year since 1856, and in a communication recently received from the governor of Colorado he reports as follows:

As nearly as can be ascertained, the following Mexican or Spanish land-grant claims are located wholly or in part in the Territory of Colorado: Vigil and St. Vrain, area claimed, 4,096,345 acres; Vigil and St. Vrain, area confirmed, 96,651 acres; Nolan, area confirmed, 48,825½ acres; Maria Baca, No. 4, area claimed, 100,000 acres; Sangre de Cristo, area claimed, 1,200,000 acres; Antonio, (not confirmed,) claimed, 2,500,000 acres; Beaubien and Miranda, about 300,000 acres; making in all 8,342,821½ acres; to which add the Ute Indian reservation, 19,077,120 acres, and the total comprises much more than one-third of the whole area of the Territory of Colorado, all of which is rendered unavailable at present both to Government and people for purposes of sale and settlement.

In order to realize the magnitude of this unavailable land I call your attention to the fact that it comprises more acres than the whole of the State of Ohio, or than Massachusetts, New Hampshire, Rhode Island, Vermont, Connecticut, and Maryland, combined.

Should you seek a remedy for the present unsatisfactory condition of affairs, I would most respectfully recommend that the Secretary of the Interior, or Congress, compel the grantees of all these tracts, or their representatives, to definitely locate the area conceded them by the Commissioner of the General Land Office within some limited time. So soon as this is done all this land will be open to pre-emption and entry, and both the Government and the settlers will be largely benefited thereby. Some of these grants are already inhabited by several thousand settlers, or squatters, as they are called, who cannot secure Government patents for their claims, and who fear to make valuable improvements until these Mexican grantees locate the quantity of land awarded them by the decisions of the Secretary of the Interior.

I sincerely believe that the interests of the General Government, and of our people, and the growth both of this Territory and New Mexico, will be subverted by the adoption of some policy which will enable emigrants who desire in good faith to settle upon the public lands, to know where they can make their selections without fear of future disturbance by adverse claimants. This whole matter is becoming so serious a drawback to the settlement of some portions of this Territory, that I feel it incumbent upon me to call the attention of your Department to the subject.

It seems to me that, if practicable, the Ute reservation should be reduced in quantity, or at least the limits should be thoroughly defined by a public and official survey, marked by such monuments as will prevent future trespass upon the domain of the savages.

Some of the claims heretofore confirmed by Congress and surveyed cover principalities in extent, the claimed limits of one such embracing by estimation more than two millions of acres.

It is most important to the growth and prosperity of those Territories, to which settlement is being rapidly attracted by the extension of railroads, that a separation be made at the earliest possible period between the public lands and those claimed under foreign titles.

In this way only can the settler know where to locate safely, so as not to intrude on the premises of others. The want of such definitive adjustment of the lines of public and private lands has already, in one instance, brought to notice by the governor of New Mexico, led to armed hostilities between settlers and employés of the grant claimants.

It is respectfully suggested that the creation by Congress of a commission similar to that instituted by the act of March 3, 1851, for California, would best conduce to a speedy and just settlement of claims of this kind, and promote the rapid growth of those young and enterprising Territories.

Some of the acts of Congress heretofore passed confirming private

land claims in New Mexico do not provide for the issuing of patents for the claims thereby confirmed. It has been claimed that the second section of the act approved March 3, 1869, (Stats., vol. 15, page 342,) provides for the issuing of such evidences of title; but, upon presentation of the question to the Department proper, it has been ruled that said section applies only to the claims confirmed by that act, and not to titles confirmed by previous acts. To relieve the matter from doubt, it is suggested that Congress be requested to pass an explanatory act or resolution construing said section.

#### INSTRUCTIONS TO THE SURVEYOR GENERAL OF NEW MEXICO.

GENERAL LAND OFFICE, August 21, 1854.

SIR: The eighth section of the act approved July 22 last for the establishment of the office of surveyor general in New Mexico declares as follows:

"SEC. 8. And be it further enacted, That it shall be the duty of the surveyor general, under such instructions as may be given by the Secretary of the Interior, to ascertain the origin, nature, character, and extent of all claims to lands under the laws, usages, and customs of Spain and Mexico; and for this purpose may issue notices, summon witnesses, administer oaths, and do and perform all other necessary acts in the premises. He shall make a full report on all such claims as originated before the cession of the territory to the United States by the treaty of Guadalupe Hidalgo, of 1848, denoting the various grades of title, with his decision as to the validity or invalidity of each of the same under the laws, usages, and customs of the country before its cession to the United States; and shall also make a report in regard to all pueblos existing in the territory, showing the extent and locality of each, stating the number of inhabitants in the said pueblos respectively, and the nature of their titles to the land; such report to be made according to the form which may be prescribed by the Secretary of the Interior; which report shall be laid before Congress for such action therein as may be deemed just and proper, with a view to confirm *bona fide* grants, and give full effect to the treaty of 1848 between the United States and Mexico; and until the final action of Congress on such claims, all lands shall be reserved from sale or other disposal by the Government, and shall not be subject to the donations granted by the previous provisions of this act."

The duty which this enactment devolves upon the surveyor general is highly important and responsible. He has it in charge to prepare a faithful report of all the land-titles in New Mexico which had their origin before the United States succeeded to the sovereignty of the country, and the law contemplates such a report as will enable Congress to make a just and proper discrimination between such as are *bona fide* and should be confirmed, and such as are fraudulent, or otherwise destitute of merit, and ought to be rejected.

The treaty of 1848 between the United States and Mexico (United States Statutes at Large, volume 9, page 922) expressly stipulates, in the eighth and ninth articles, for the security and protection of private property. The terms there employed, in this respect, are the same in substance as those used in the treaty of 1803, by which the French republic ceded the ancient province of Louisiana to the United States, and consequently, in the examination of foreign titles in New Mexico, you will have the aid of the enlightened decisions, and the principles therein developed, of the Supreme Court of the United States upon the titles that were based upon the treaty of cession and the laws of Congress upon the subject.

The security to private property for which the treaty of Guadalupe Hidalgo stipulates, is in accordance with the principles of public law as universally acknowledged by civilized nations.

"The people change their allegiance; their relations to their ancient sovereign is dissolved, but their relations to each other, and their rights of property, remain undisturbed."—(United States *vs.* Percheman, 7 Peters's Reports.)

In the case of the United States *vs.* Arrudondo and others, (6 Peters's Reports,) the Supreme Court declare that Congress "have adopted, as the basis of all their acts, the principle that the law of the province in which the land is situated is the law which gives efficacy to the grant, and by which it is to be tested whether it was *property* at the time the treaties took effect."

Upon the same basis Congress has proceeded in the present act of legislation, which requires the surveyor general, under instructions from the Secretary of the Interior, to ascertain the origin, nature, character, and extent of all claims to land "under the laws, usages, and customs of Spain and Mexico;" and arms the surveyor general with power for the purpose, by authorizing him to "issue notices, summon witnesses, administer oaths, and do and perform all other necessary acts in the premises."

The private land-titles in New Mexico are derived from the authorities of old Spain, as well as of Mexico.

Among the "necessary acts" contemplated by the law, and required of you, is that you shall—

1st. Acquaint yourself with the land system of Spain, as applied to her ultramarine possessions, the general features of which are found—modified, of course, by local requirements and usages—in the former provinces and dependencies of that monarchy on this continent. For this purpose you must examine the laws of Spain, the royal ordinances, decrees, and regulations as collected in White's *Recopilacion*, two volumes.

By acts of Congress approved May 26, 1824, May 23, 1828, and June 17, 1844, (United States Statutes at Large, vol. 4, page 52, chap. 173; page 284, chap. 70; and vol. 5, page 676, chap. 95,) the United States district courts were opened for the examination and adjudication of foreign titles. Numerous cases on appeal under these laws, and other cases on writs of error, in which actions on ejectment in the courts below had been instituted, were brought before the Supreme Court of the United States, where the rights of property under inceptive and imperfect titles, which originated under the Spanish system, have been thoroughly examined and discussed with eminent ability.

For these decisions I refer you to Peters's and Howard's reports of the decisions of the Supreme Court of the United States. It is important you should carefully examine them in connection with the Spanish law, and the legislation of Congress on the subject, in order that you may understand and be able to apply the principles of the Spanish system, as understood and expounded by the authorities of our Government.

2d. Upon your arrival at Santa Fé you will make application to the governor of the Territory for such of the archives as relate to the grants of land by the former authorities of the country. You will see that they are kept in a place of security from fire, or other accidents, and that access is allowed only to land-owners, who may find it necessary to refer to their title records, and such references must be made under your eye, or that of a sworn employé of the Government.

You will proceed at once to arrange and classify the papers in the order of date, and have them properly and substantially bound. You will then have schedule (marked 1) of them made out in duplicate, and will prepare abstracts, (No. 2,) also in duplicate, of all the grants found in the records, showing the names of grantees, date, area, locality, by whom conceded, and under what authority.

You will prepare, in duplicate, from the archives or authoritative sources, a document (No. 3) exhibiting the names of all the officers of the Territory who held the power of distributing lands, from the earliest settlement of the Territory until the change of government, indicating the several periods of their incumbency, the nature and extent of their powers conceding lands; whether, and to what extent, and under what conditions and limitations, authority existed in the governors or political chiefs to divide (repartir) the public domain; whether in any class of cases they had the power to make an absolute grant—and, if so, for what maximum in area—or whether subject to the affirmation of the departmental or supreme government; whether the Spanish surveying system was in operation, and since what period in the country, and under what organization; also, with verified copies in the original, and translations, of the laws and decrees of the Mexican republic, and regulations which may have been adopted by the general government of that republic for the disposal of the public lands in New Mexico. Herewith you will receive a table of land measures adopted by the Mexican government, translated from the "*Ordenanzas de Tierras y Aguas*," by Marianas Galvan, edition of 1844, as printed in Ex. Doc. No. 17, first session Thirty-first Congress, House of Representatives, containing much valuable information on the subject of California and New Mexico, and to which document I would invite your special and careful examination.

In a report of the 14th November, 1851, from the surveyor general of California, it is stated that all the grants, &c., of lots or lands in California, made either by the Spanish government or that of Mexico, refer to the "*vara*" of Mexico as the measure of length; that by common consent in California that measure is considered as exactly equivalent to thirty-three American inches. That officer then inclosed to us copy of a document he had obtained as being an extract of a treaty made by the Mexican government, from which it would seem that another length is given to the "*vara*;" and by J. H. Alexander's (of Baltimore) *Dictionary of Weights and Measures*, the Mexican vara is stated to be equal to 92.741 of the American yard.

This office, however, has sanctioned the recognition, in California, of the Mexican vara as being equivalent to thirty-three American inches.

You will carefully compare the data furnished in the table herewith, and in the foregoing, with the Spanish measurements in use in New Mexico, and will report whether they are identical; or if varied in any respect by law or usage, you will make a report of all the particulars.

You should also add to "Document No. 3," the forms used under the former governments to obtain grants, beginning with the initiatory proceeding, viz, the petition, and indicating the several successive acts until the title was completed. A copy of the



"schedule," "abstract," and "document," required of you in the foregoing, duly authenticated by you, should constitute a part of the permanent files of the surveyor general's office, and duplicates of them should be sent as soon as practicable to the Department of the Interior.

The knowledge and experience you will acquire in arranging the archives, collecting materials, and making out the documents called for by these instructions, will enable you to enter understandingly upon the work of receiving and examining the testimony which may be presented to you by land claimants, and prepare your report thereon for the action of Congress.

In the first instance, you will provide yourself with a journal, consisting of substantially bound volume or volumes, which is to constitute a complete record of your official proceedings in regard to land-titles; and with a suitable docket, for the entry therein of claims in the order of their presentation, and so arranged as to indicate at a glance a brief statement of each case, its number, name of original and present claimant, area, locality, from what authority derived, nature of title, whether complete or incomplete, and your decision thereon.

Your first session should be held at Santa Fé, and your subsequent sessions at such places and periods as public convenience may suggest, of which you will give timely notice to the Department.

You will commence your session by giving proper public notice of the same, in a newspaper of the largest circulation in the English and Spanish languages; will make known your readiness to receive notices and testimony in support of the land claims of individuals, derived before the change of Government.

You will require claimants in every case, and give public notice to that effect, to file a written notice setting forth the name of "present claimant;" name of the "original claimant;" nature of claim, whether inchoate or perfect; its date; from what authority the original title was derived, with a reference to the evidence of the power and authority under which the granting officer may have acted; quantity claimed; locality, notice, and extent of conflicting claims, if any, with a reference to the documentary evidence and testimony relied upon to establish the claim, and to show a transfer of right from the "original grantee" to "present claimant."

You will also require of every claimant an authenticated plat of survey, if a survey has been executed, or other evidence, showing the precise locality and extent of the tract claimed.

This is indispensable, in order to avoid any doubt hereafter in reserving from sale, as contemplated by law, the particular tract or parcel of land for which a claim may be duly filed, or in communicating the title to the same hereafter, in the event of a final confirmation.

The effect of this will be not only to save claimants from embarrassments and difficulties inseparable from the presentation and adjudication of claims with indefinite limits, but will promote the welfare of the country generally, by furnishing the surveyor general with evidence of what is claimed as private property, under treaty and the act of July 22, 1854; thus enabling him to ascertain what is undisputed public land, and to proceed with the public surveys accordingly, without awaiting the final action of Congress upon the subject.

You will take care to guard the public against fraudulent or antedated claims, and will bring the title-papers to the test of the genuine signature, which you should collect of the granting officers, as well as to the test of the official registers or abstracts which may exist of the titles issued by the granting officers. In all cases, of course, the original title-papers are to be produced, or loss accounted for; and where copies are presented, they must be authenticated; and your report should also state the precise character of the papers acted upon by you, whether originals or otherwise. Where the claim may be presented by a party as "present claimant," in right of another, you must be satisfied that the derangement of title is complete; otherwise the entry and your decision should be in favor of the "legal representatives" of the original grantee.

Your journal should be prefaced by a record of the law under which you are required to act, and of your commission and oath of office; and should contain a full record of the notice and evidence in support of each claim, and of your decision, setting forth, as succinctly and concisely as possible, all the leading facts, particulars, and the principles applicable to the case, and upon which such decision may be founded. All the original papers should, of course, be carefully numbered, filed, and preserved; and upon each should be indorsed the volume and page of the record in which they are entered, and such reference should be made on the journal and docket as will properly connect them with each other.

Your docket should be a condensed exhibit of every case and of your decision. The claims, both as to grade and dignity, may be classified by numerals or alphabetically, accompanied by explanatory notes, in such a manner that it will show every case confirmed and every one rejected by you.

In the case of any town-lot, farm-lot, or pasture-lot, held under a grant from any

corporation or town to which lands may be granted for the establishment of a town by the Spanish or Mexican government, or the lawful authorities thereof, or in the case of any city, town, or village lot, which city, town, or village existed at the time possession was taken of New Mexico by the authorities of the United States, the claim to the same may be presented by the corporate authorities; or where the land on which the said city, town, or village was originally granted to an individual, the claim may be presented by or in the name of such individual; and the fact being proved to you of the existence of such city, town, or village at the period when the United States took possession, may be considered by you as *prima facie* evidence of a grant to such corporation, or to the individuals under whom the lot-holders claim; and where any city, town, or village shall be in existence at the passage of the act of 22d July, 1854, the claim for the land embraced within the limits of the same may be made and proved up before you by the corporate authority of the said city, town, or village. Such is the principle sanctioned by the act of 3d March, 1851, for the adjudication of Spanish and Mexican claims in California; and I think its application and adoption proper in regard to claims in New Mexico.

In the month of March, 1849, there was published in the Atlantic States an extract of a letter dated December 12, 1848, at Santa Fé, New Mexico, purporting to be from a young officer of the Army, in which it was stated that "the prefect at El Paso del Norte has for the last few months been very active in disposing (for his own benefit) of all lands in that vicinity that are valuable, *antedating* the title to said purchasers; 'that these land titles' would be made a source of profitable litigation," &c. It will be your duty to subject all papers under suspicion of fraud to the severest scrutiny and test in order to settle the question of their genuineness.

You will also collect information, from authentic sources, in reference to the laws of the country respecting minerals, and ascertain what conditions were attached to grants embracing mines; whether or not the laws and policy of the former governments conferred absolute title in granting lands of this class in New Mexico. It is proper, also, and you are instructed in the case of every claim that may be filed, to ascertain from the parties, and require testimony, as to whether the tracts claimed are mineral or agricultural; and you will be careful to make the necessary discrimination in the record of your proceedings and your docket. Your report should be divided into two parts: Part first should embrace individual and municipal claims, and should be prepared in the manner contemplated by law, and in accordance with the requirements in the foregoing instructions.

The law further requires you also to "make a report in regard to all pueblos existing in the Territory, showing the extent and locality of each, stating the number of inhabitants in the said pueblos respectively, and the nature of their titles to the land." Part second of your report should be devoted to this branch of your duty.

It will be your business to collect data, from the records and other authentic sources, relative to these pueblos, so that you will enable Congress to understand the matter fully and legislate in such a manner as will do justice to all concerned.

In a report dated July 29, 1849, in camp near Santa Fé, from the Indian agent, James S. Calhoun, to the Commissioner of Indian Affairs, he says: "The Pueblo Indians, it is believed, are entitled to the early and special consideration of the Government of the United States; they are the only tribe in perfect amity with the Government, and are an industrious, agricultural, and pastoral people, living principally in villages ranging north and west of Taos south, on both sides of the Rio Grande, more than two hundred and fifty miles;" that, by a Mexican statute "these people," as he had been informed by Judge Houghton, of Santa Fé, "were constituted citizens of the republic of Mexico, granting to all of mature age, who could read and write, the privilege of voting." But this statute has no practical operation; that "since the occupancy of the territory by the Government of the United States, the territorial legislature of 1847 passed the following act, which at the date of the Indian agent's report was in force:

"SECTION 1. *Be it enacted by the General Assembly of the Territory of New Mexico*, That the inhabitants within the Territory of New Mexico, known by the name of Pueblo Indians, and living in towns or villages built on lands granted to such Indians by the laws of Spain or Mexico, and conceding to such inhabitants certain lands and privileges, to be used for the common benefit, are severally, hereby, created and constituted bodies politic and corporate, and shall be known in law by the name of the 'Pueblo,' &c., (naming it,) and by that name they and their successors shall have perpetual succession, sue and be sued."

In a subsequent report, viz, of the 4th of October, 1849, the same officer reported from Santa Fé that "the pueblos or civilized towns of Indians of the Territory of New Mexico are the following:

	Inhabitants.
In the county of Taos: Taos, Picoris .....	283
In the county of Rio Arriba: San Juan, Santa Clara .....	500
In the county of Santa Fé: San Il de Fonso, Namba, Pojoaque Tesuque....	590

	Inhabitants.
In the county of Santa Ana: Cochite, Santo Domingo, San Filipo, Santa Ana, Yia Jenez .....	1,918
In the county of Bernalillo: Sandia Gleta .....	283
In the county of Valencia: Leguna, Acona, Zunia .....	1,800
Opposite El Paso: Socoro, Isletas .....	600

## RECAPITULATION.

*Pueblos of New Mexico.*

County of Taos .....	283 over five years of age.
County of Rio Arriba .....	500 over five years of age.
County of Santa Fé .....	590 over five years of age.
County of Santa Ana .....	1,918 over five years of age.
County of Bernalillo .....	283 over five years of age.
County of Valencia .....	1,800 over five years of age.
District of Tondero, opposite El Paso del Norte .....	600 over five years of age.

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6,584

The above enumeration, it is stated by the officer mentioned, "was taken from census ordered by the legislature of New Mexico, convened December, 1847, which includes only those of five years of age and upwards;" and further, that "these pueblos are located from ten to near one hundred miles apart, commencing north at Taos, and running south to near El Paso, some four hundred miles or more, and running east and west two hundred miles;" this statement having no reference to pueblos west of Zunia.

In another dispatch, dated the 15th October, 1849, at Santa Fé, the same agent reports that "these pueblos are built with direct reference to defense, and their houses are from one to six stories high," &c.; that "the general character of their houses is superior to those of Santa Fé;" they "have rich valleys to cultivate," &c.; and they "are a valuable and available people, and as firmly fixed in their homes as any one can be in the United States;" that "their lands are held by Spanish and Mexican grants, to what extent is unknown;" that Santa Ana, as Major Weightman had informed the agent, "decreed in 1843 that one born in Mexico was a Mexican citizen, and as such is a voter, and therefore all the Pueblo Indians are voters;" but that "the exercise of this privilege was not known prior to what is termed an election, the last one in this Territory," &c.

It is obligatory on the Government of the United States to deal with the private land titles, and the "pueblos," precisely as Mexico would have done had the sovereignty not changed. We are bound to recognize all titles as she would have done—to go that far and no further. This is the principle which you will bear in mind in acting upon these important concerns.

You will append to your report on the pueblos the best map of the country that can be procured on a large scale, and will indicate thereon the localities and extent of the several pueblos as illustrative of that report, which you are desired to prepare and transmit to the Department at as early a period as the nature of the duty will allow.

Very respectfully, your obedient servant,

JOHN WILSON,  
*Commissioner.*

WM. PETHAM, Esq.,  
*U. S. Surveyor General of New Mexico.*

The foregoing instructions are hereby approved.

R. McCLELLAND,  
*Secretary.*

DEPARTMENT OF THE INTERIOR, August 25, 1854.

*Extract of a treaty made with the Mexican government, which accompanied a report dated November 14, 1851, from the United States surveyor general of California, respecting the ratio of land measures between those employed under the Mexican government and those in use in the United States.*

[From the Mexican ordinance for land and sea.]

Article 20th of the agreement entered into between the minister plenipotentiary of the Mexican republic and her agents in London, the 15th of September, 1837, with the holders of Mexican bonds.

20th. In compliance of what is ordered by the seventh article of the preceding law and in order to carry into effect the stipulation in the preceding agreement, in regard

to the holders of bonds deferred, it is declared that the act of which mention is made in said agreement answers to 4,840 English yards squared, equivalent to 5,762.403 Mexican varas square; inasmuch that the sitio de ganado mayor contains 4,338.964 acres, the Mexican vara having been found, by exact measures, equal to 837 French millimetres, and consequently to  $\frac{1}{1000000}$  of the English imperial yard.

Reducing the ratio of 4,840 square yards and 5,762.403 square varas, the vara will be ..... 32.99312  
 Reducing the 4,338.464 acres ..... 32.99311  
 Reducing the fraction  $\frac{214468}{1000000}$  ..... 32.992884  
 The fraction mentioned in note  $\frac{18755}{1000000}$  ..... 32.98718

*Table of land measures adopted in the republic of Mexico.*

Names of the measures.	Figures of the measures.	Length of the figures expressed in varas.	Breadth in varas.	Areas in square varas.	Areas in caballerias.
Sitio de ganado mayor.....	Square.....	5,000	5,000	25,000,000	41.623
Criadero de ganado mayor...	Square.....	2,500	2,500	6,250,000	10.253
Sitio de ganado menor.....	Square.....	3,333 $\frac{1}{3}$	3,333 $\frac{1}{3}$	11,111,111 $\frac{1}{3}$ 0	18.272
Criadero de ganado menor...	Square.....	1,666 $\frac{2}{3}$	1,666 $\frac{2}{3}$	2,777,777 $\frac{2}{3}$ 0	4.558
Caballeria de tierra.....	Right angled parallelogram.....	1,104	552	609,408	1
Media caballeria.....	Square.....	552	552	304,704	$\frac{1}{2}$
Cuarto caballeria ó Suerte de tierra.....	Right angled parallelogram.....	552	276	152,352	$\frac{1}{4}$
Fenega de sembraduro de maiz.....	Right angled parallelogram.....	376	184	56,784	1-12
Sala para casa.....	Square.....	50	50	2,500	0.004
Fundo legal para pueblos....	Square.....	1,900	1,900	1,440,000	2.036

The Mexican vara is the unit of all the measures of length, the pattern and size of which are taken from the Castilian vara of the mark of Burgos, and is the legal vara used in the Mexican republic. Fifty Mexican varas make a measure which is called cordel, which instrument is used in measuring lands.

The legal league contains 100 cordels, or 5,000 varas, which is found by multiplying by 100 the 50 varas contained in a cordel. The league is divided into two halves and four quarters, this being the only division made of it. Half a league contains 2,500 varas, and a quarter of a league 1,250 varas. Anciently the Mexican league was divided into three miles, the mile into a thousand paces of Solomon, and one of these paces into five-thirds of a Mexican vara; consequently the league had 3,000 paces of Solomon. This division is recognized in legal affairs, but has been a very long time in disuse, the same as the pace of Solomon, which in those days was called vara, and was used for measuring lands. The mark was equivalent to two varas and seven-eighths—that is, eight marks containing twenty-three varas—and was used for measuring lands.

## 22—OPERATIONS AND RULINGS UNDER THE MINING STATUTES OF JULY 26, 1866, AND JULY 9, 1870.

Under these very liberal enactments miners having expended an amount equal to \$1,000 in labor and improvements upon their respective claims, and in regard to whose possession there is no controversy or opposing claim, are enabled, after proper notice, to have their claims surveyed; and upon final payment of the Government price of the land, to receive complete title by patent in lieu of what had before been a mere possessory claim under local mining customs and regulations. Numerous applications for patents for mines are being received, and in many cases final titles have passed to the claimants.

These enactments, inaugurating, as they do, an entirely new system in our public-land policy, have opened a new and extensive field of operations, and in dealing with the interests involved the General Land

*\*Translation of a note at the foot of the page.—Without doubt, in this fraction there is an error of the press, since considering the English yard 914 millimetres, and the Mexican vara 837 millimetres, the vara will be  $\frac{915,755-1,000,000}{1,000,000}$  of a yard, the first figure 6 being the inverted 9.*

Office has, for want of precedents by which to govern its actions, encountered many difficulties in adjudicating the numerous questions arising in the administration of these statutes.

It has always been held that where the legislature of a State or Territory has enacted general laws regulating the extent of mining claims and the manner of their location, such laws should be regarded as the local customs or rules of miners, and that under the statute proof of conformity therewith is essential in establishing a right to a patent from the Government in all cases where the claim had its inception *subsequent* to the date of such State or territorial enactments. Such enactments are held to be in full force and unaffected by the mineral laws of Congress, except where they sanction locations in *excess* of the limits fixed by Congressional laws, in which cases they are restricted accordingly.

In those States and Territories where the local legislatures have failed to enact general laws in relation to mining locations, the customs and regulations adopted at miners' meetings in the different districts are held to govern, it being of course understood that in making locations since the enactment of mining laws of Congress they cannot exceed the extent therein specified, whatever such district regulations may allow.

In the adjustment of claims of this character it becomes necessary therefore to consult the laws of the various mineral States and Territories relating to the subject, where such laws have been enacted, or, in the absence of such legislation, to be informed of the laws and regulations adopted by miners as a body in each local mining district. It is proposed, as a matter of convenient reference in the future, to give in this report a brief digest of laws and regulations governing in the various mineral localities so far as they relate to the extent of mining claims allowed to each person or association of persons.

#### *Extent of mineral locations in New Mexico.*

The legislature of New Mexico, on the 18th day of January, 1865, passed an "Act concerning mining claims;" and the question was presented to this office as to the rights of claimants and the duties of the land officers, in view of its provisions in connection with those of the law of Congress, upon which it was ruled in effect as follows:

The first proviso to the fourth section of the mining act of Congress, approved July 26, 1866, requires: "That no location hereafter made shall exceed 200 feet in length along the vein for each locator, with an additional claim for discovery to the discoverer of the lode, with the right to follow such vein to any depth, with all its dips, variations, and angles, together with a reasonable quantity of surface for the convenient working of the same, as fixed by local rules;" it being provided further "that no person may make more than one location on the same lode, and not more than 3,000 feet shall be taken in any one claim by any association of persons." Said act, among other conditions, restricts the right to apply for and receive patents to those who have previously occupied and improved their claims according to the local customs or rules of miners.

The manner of making locations and the number of feet that can be taken on the same vein or lode by an individual or an association depends upon the regulations in force in the mining regions; the act of July 26, 1866, in no way superseding or modifying these regulations or customs except where they authorize the location of more than 200 feet on the same lode by any person, or more than 3,000 feet by any association of persons, since the 26th of July, 1866.

An individual cannot, *since* said date, locate more than 200 feet upon the same lode, unless he is the discoverer, nor an association more than 3,000 feet; but whether an individual can locate *as much* as 200 feet, or an association as much as 3,000 feet, depends upon the mining regulations in force at the date of such locations, and in the latter case also upon the *number of persons* forming such association.

Individuals cannot, by forming themselves into companies or associations, locate a greater number of feet to each person than can be done by each acting separately. They may locate as a company or an association at the rate of 200 feet to each individual embraced in it, 200 feet additional being allowed the discoverer, if the local regulations permit that extent to be located, until 3,000 feet are taken, after which the right of such company or association to locate upon the lode is exhausted, no matter how many members may compose it.

In States or Territories where the mining regulations limit locations to less than 200 feet to each individual, or less than 3,000 feet to any association of persons, claimants will be restricted accordingly, the right to locate not being enlarged by the act of Congress.

The act of the territorial legislature of New Mexico referred to, among other things, provides :

That every *discoverer* of a lode, ledge, or vein of gold-bearing quartz, or of a lode, crevice, or deposit of silver, cinnabar, copper, lead, coal, or any other ore, or the same mixed with other metals or ores, shall have the privilege of locating and of holding, as against all persons and powers, except the United States, *six hundred feet* of the length of such lode, ledge, vein, deposit, or crevice, horizontal measurement, of its entire width, including all of its dips, openings, spurs, and angles, &c.

The act further provides :

That all mines and mineral grounds heretofore occupied in this Territory, upon which mining has not been prosecuted regularly for a period of ten years or more, except in cases where the fee-simple title to the land has been granted by competent authority to those claiming the same, or where the claimant has remained in actual possession and occupation, provided the possession be unquestionable, are hereby declared vacant and abandoned, and liable to the operation of this act as fully in all respects as if they had never been occupied or denounced; and he or they who shall re-occupy such vacant and abandoned mines shall be entitled to all the rights and privileges of original discoverers, as provided in this act. Companies of two or more persons, incorporated or otherwise, shall have the same rights and privileges under this act as single or natural persons, and may locate and hold in manner aforesaid *one mining claim of three hundred feet for each member of the company, and one discovery claim*; provided, no company shall locate more than *four claims, including one discovery claim*, or one thousand five hundred feet in all upon any one vein or mine; *provided further*, a company may acquire by purchase but *four mining claims*, and this under the same conditions that bound the vendors.

From the foregoing it will be seen that while the territorial law regulating mining claims in New Mexico fixes the maximum of a *company* location at 1,500 feet, being but one-half of the extent prescribed by the congressional enactment, it fixes the extent of *individual* locations at 300 feet, or 100 feet in *excess* of the congressional limit.

In dealing, therefore, with mining claims in this Territory, located between the dates of January 18, 1865, and July 26, 1866, the territorial law is recognized in all respects; but with regard to locations made *subsequent* to July 26, 1866, it is held—1st, that no individual location can exceed 200 linear feet along the course of the vein or lode, except in the case of the discoverer, who is entitled to an additional 200 feet; 2d, that no company location can exceed 1,500 linear feet along the vein or lode, and such locations cannot in any case be made at a rate exceeding 200 linear feet to each member of the company, except to the discoverer, who is entitled to locate an additional claim of 200 feet; and, 3d, that this restriction to 1,500 feet is applicable only to company *locations*, and is not

held to affect their right to *purchase* the possessory titles to as many adjoining claims upon the lode as may be authorized by the territorial law aforesaid, which, as before stated, limits such right of purchase to *four claims*; and as a "claim," since the passage of the law of Congress of July 26, 1866, cannot exceed 200 feet of the linear extent of a lode, a company having made an original location of 1,500 feet in manner aforesaid cannot by purchase obtain the possessory right to more than 800 additional feet on the same lode, or 2,300 feet in all, being 1,500 feet by virtue of location and discovery and 800 feet by purchase of adjoining locators.

*Colorado.*

In this Territory, prior to the first session of its legislature in 1861, the mineral region was divided into several districts, and in each of these districts the miners adopted their own rules and regulations governing the location and holding of claims. In most cases a claim on a lode was fixed at 100 feet in length, with surface-ground 50 feet wide, while the discoverer of a lode was allowed to hold one claim by right of discovery and one additional claim as a locator. In some of the districts, however, a discovery claim of 200 feet was allowed, the other claims being limited to 100 feet.

In all the districts it was ruled that actual discovery and opening of the crevice until well-defined walls were found were essential to entitle the discoverer to an additional claim. When the lode was thus once found and defined, other locators could hold adjacent claims by recording the same in proper manner.

On the 7th of November, 1861, the legislature passed "An act concerning lode claims," which defines a claim upon a lode to mean 100 feet of the length of such lode, surface measurement, of the entire width of such lode or crevice. This law did not annul or invalidate claims which had their inception under district laws, but confirmed them, and provided a uniform law applicable to all mining districts in the Territory with respect to locations made after its passage.

On the 11th March, 1861, the legislature passed "An act to define the extent of mineral and quartz lodes," which provides that all mineral and quartz lodes discovered thereafter shall cease and terminate, so far as they have any legal existence, at the distance of 800 feet in either direction on the line of the lode from the center of the discovery shaft.

On the 9th February, 1866, the legislature passed "An act concerning mines and minerals," which provided:

That hereafter each and every person who shall discover any mineral lode or vein of gold-bearing ore, or of silver or other valuable metals, in this Territory, shall, by virtue of such discovery, be entitled to take, hold, and possess 1,400 feet, linear measure, of such lode or vein, of which the discovery shaft shall be the center thereof; and said 1,400 feet so taken shall be known and described as the discovery claim.

Said act also provides that—

All lodes or veins of gold, silver, or other valuable minerals which may hereafter be discovered shall be marked at the point of discovery by a substantial stake, post, or stone monument having inscribed thereon the name of the discoverer or discoverers, and the name of the lode or vein, with date of discovery; and the discoverer or discoverers shall, before recording, excavate thereon a shaft at least 10 feet deep, or deeper if necessary to find a well-defined crevice, or forfeit all right and title he or they may have acquired by virtue of such discovery—

the extent of surface-ground allowed for the convenient working of the claim being 25 feet on each side of the center of the vein or lode.

This act likewise provides, in substance, that upon all lodes discovered in compliance with its provisions there shall be *se* apart two claims of

100 feet each—one for the benefit of common schools, and the other for the use and benefit of disabled miners and poor of the Territory or State of Colorado—which claims shall be located respectively at the extremities of the discovery claim, and shall be known and described as number one east, and the other as number one west, from discovery.

On the 11th February, 1870, the legislature of Colorado passed "An act for the relief of pre-emptors and locators of veins or lodes of quartz or other rock on the mineral lands of the public domain," by which it is provided that—

No statutory law of Colorado Territory shall be so construed as to prohibit the location of 3,000 feet or less, in any vein or lode, in the manner prescribed in section 4 of an act of Congress approved July 26, 1866, entitled "An act granting the right of way to ditch and canal owners over the public lands, and for other purposes," nor to prejudice any rights to obtain patents for the same as provided in said act. All pre-emptions and locations of 3,000 feet or less on any vein, lode, or ledge, made since the passage of the said act of Congress and conforming to the same, shall be good and valid. Nothing in this act shall be so construed as to prejudice any rights acquired prior to the passage of this act.

As the mining act of Congress makes it one of the conditions precedent to obtaining a patent that the claimant shall have previously occupied and improved his claim according to local customs or rules of miners, this office requires claimants to show by competent proof under which of these district regulations or territorial enactments their respective claims had their inception.

### *Montana.*

In this Territory the local law in relation to lode-claims is the act of its legislative assembly passed December 26, 1864, entitled "An act relating to the discovery of gold and silver quartz, leads, lodes, or ledges, and of the manner of their location," by which it is provided in effect, that any person or persons who may thereafter discover any quartz, lead, lode, or ledge, shall be entitled to one claim thereon by right of discovery, and one claim each by pre-emption; that claims on any lead, lode, or ledge, either of gold or silver, thereafter discovered, shall consist of not more than 200 feet along the lead, lode, or ledge, together with surface-ground 50 feet in width on each side thereof for working purposes; that to entitle any person or persons to record in the county recorder's office of the proper county any lead, lode, or ledge, or claim thereon, there shall first be discovered in said lode, lead, or ledge, a vein or crevice of quartz or ore, with at least one well-defined wall; that before any record of such claim shall be made, there shall be placed at each extremity of the discovered claim a good and substantial stake, not less than 5 inches in diameter, said stake to be firmly planted or sunken in the ground, and to extend 2 feet above ground; that upon each stake there shall be placed in legible characters the name of the lead, lode, or ledge, and that of the discoverer or discoverers, the date of discovery, and the name of each pre-emptor or claimant, and the direction or bearing as near as may be of his or her claim.

Said act further requires that notice of such discovery or pre-emption shall be filed for record in the county recorder's office of the county in which the same may be situated within fifteen days from the date of such discovery or pre-emption, and fixes the extent which may be located along the course of any vein, lead, lode, or ledge, in addition to the discovery claim, at 1,000 feet along such lead, lode, or ledge, in each direction from the discovery claim thereon.

In acting upon application for patents for quartz claims in Montana,



located since 26th December, 1864, this office accordingly holds that no claim to a patent in that Territory under the law of Congress is valid for an extent greater than 2,200 linear feet of a vein or lode, and that a claimant must, in order to establish a right to a patent, make satisfactory proof of having complied with the district or territorial law applicable to his claim, in force at the time of its location.

*Locations of placer-mines in Montana.*

On the 11th December, 1867, the legislative assembly of Montana enacted—

That any person or persons who may hereafter discover any gulch, bank, bar, or hill claim or claims, shall be entitled to one claim by discovery right and one claim each by pre-emption; that all gulch claims shall be 200 feet up and down said gulch, and extending 200 feet upon each side from the center of said gulch; that all bank, bar, or hill claims shall be 200 feet square; that a gulch with its banks, bars, and hill-sides shall constitute but one district; that all claims owned or claimed to be owned by any person or persons shall be represented by actual working of said claim or claims at least two days in each week, except at any time when such claim cannot be practically worked, which shall be determined by two-thirds of the claim-holders of the district.

The act further provides, in substance, that each district shall elect a recorder, whose duty it shall be to record such claims in a book of record, to be open to the inspection of all persons, and to give to any person or persons a certificate of such pre-emption; that before any record shall be made under the provisions of this act, there shall be placed at the extremity of each claim or discovery claim one stake, said stake to be at least two inches in diameter, containing the name of the person or persons pre-empting such claims—such persons to have at least fifteen days from the date of staking a claim in which to record the same; that the act shall not be so construed as to prohibit any person or persons from holding one or more claims by purchase; that any person or persons holding one or more claims by pre-emption or purchase, and working upon one, or digging a drain or other ditch for such claim, shall be considered by such work as actually representing the same; and finally the act provides that nothing therein contained shall be so construed as to prohibit any body of miners, to the number of thirty, from making any and all local laws which they may desire, upon a call of the miners of any district, or upon the posting of a notice in three public places for at least three days, specifying the time and place of holding a meeting, provided that said laws shall not conflict with vested rights acquired under authority of this act prior to such meeting.

As the mining acts of Congress confer no authority for granting patents for either lode or placer claims *not* previously occupied and improved in accordance with local customs or rules of miners, applicants for patents for placer-mines in Montana are required to furnish satisfactory evidence of having complied with the foregoing legislative enactment; or, if their claims existed prior to its passage, it will be incumbent upon them to show under what local customs or rules their claims are held, and the origin of their right of possession.

*California, Nevada, and Utah.*

In the States of California and Nevada, and in the Territory of Utah, the mining regulations of the several districts are still in force and recognized as the local customs or rules of miners; a compliance with which is essential to establish a right to a patent under the mining of July 26, 1866. Where these district regulations permit location

greater extent than is sanctioned by the said act, they are restricted accordingly, when made subsequent to its passage.

In the remaining mineral States and Territories, viz, Oregon, Washington, Idaho, Wyoming, and Arizona, this office is as yet unadvised as to whether the location of mineral claims is governed by general legislative enactments, or by the regulations adopted by the miners themselves in the different districts, no applications for patents for this class of lands having yet been properly reported by the local land officers in those localities.

*Status of mining claims in school sections.*

An application having been made for a patent for a mining claim situated in a school section in the State of California, the question was raised as to the rights of the applicant, in view of the grant made to the State by the act of March 3, 1853, (U. S. Stats., vol. 10, page 244.)

It being satisfactorily shown that the mineral claim in question was taken up, held, and improved according to local customs and rules in 1864, and the land was not surveyed by the United States until 1870, it was ruled that at the date of its location said mining premises formed a part of the unsurveyed public domain, which, by the first section of the mining statute of 26th July, 1866, is declared "to be free and open to exploration and occupation by all citizens of the United States, and those who have declared their intention to become citizens;" and that as the applicant was in the occupancy of his claim at the date of the Government survey of the township by virtue of the authority of said statute, the fact that the premises fall within a school section, which circumstance the miner had no means of knowing previous to the survey, did not affect his right under the statute of July 26, 1866, and that after complying with its provisions and requirements he would be entitled to a patent; the State of California being by law allowed other land as indemnity for the area so patented.

In dealing with another mineral claim situated in a school section in California, the location of which was not made until *after* the filing of the plat of the official survey of the township, the right of the claimant to a patent under the mining statute was denied, the land having already passed to the State; the Supreme Court of the United States having decided, in the case of *Cooper vs. Roberts*, (18 Howard, 173,) that mineral lands pass with a school land-grant to the State.

*Adverse claims.—Further legislation necessary.*

The sixth section of the mining act of July 26, 1866, provides—

That whenever any adverse claimants to any mine located and claimed as aforesaid shall appear before the approval of the survey as provided in the third section of this act, all proceedings shall be stayed until final settlement and adjudication in the courts of competent jurisdiction of the rights of possession to such claim, when a patent may issue, as in other cases.

The act is entirely silent as to the time within which, or the party by whom, the action shall be commenced in court for the determination of the question of right of possession; and in consequence this office encounters much difficulty in reaching definitive action in these cases, as frequently neither the applicant for patent nor the adverse claimant is willing to take the initiative in judicial proceedings.

In the earlier cases of this kind it was ruled that upon the party out of possession should rest the *onus*, and that he should commence suit

within a reasonable time after notice, or his claim should be considered waived; but a difficulty arose in enforcing this rule in this, that possession of mining property is frequently more constructive than actual; that both parties may have the constructive possession, but neither be in the actual possession; again, both parties may be in the actual possession of and working the same lode, but at different points and under different locations and names, it not being known until development that the veins were one and the same. In such cases, both parties being in possession, the foregoing rule would of course be inapplicable.

The general rule now adopted by this office is that the *adverse claimant* shall institute the required proceedings in court, and that his failure to do so within a reasonable time, after due notice, shall be considered as a waiver of his claim; this ruling, however, being varied where, under the circumstances, its enforcement would work a manifest injustice to the adverse claimant, such cases, however, being exceptional.

Another source of difficulty exists in the fact that the diagram and notice required by law to be posted upon the claim for ninety days before survey are found insufficient to give proper information of the precise or even the approximate area and boundaries of the surface ground claimed for the convenient working of the mine; adjoining claimants being consequently unable to determine, until the final survey is actually made, whether the claim for which patent is sought conflicts with their rights or not, and when they find that such conflict actually exists, their objections are frequently presented too late for consideration, as the law limits the filing of adverse claims to the date of the approval of the survey by the surveyor general.

It is suggested as a remedy for this evil that where an application is made for a patent for either a lode or placer claim requiring survey, the applicant should be required by law to *first* cause a survey to be made of the ground so claimed, in the proper manner, by a United States deputy surveyor; that the notice and diagram be made from this survey, giving its proper metes and bounds; that *thereafter* said diagram and notice be posted and published according to law for the period of ninety days, and at the expiration of that time, *should no adverse claimant have appeared*, the surveyor general will approve the survey so made in the customary manner.

It is not perceived what reasonable objections could be offered by bona fide claimants to the adoption of the plan suggested. The survey will certainly cost the applicant no more if made *before* than after the expiration of the ninety days; and adjoining or adverse claimants will then have the opportunity of knowing, from the corner posts of the survey, as well as from the notice and diagram, precisely what ground is claimed by the applicant for patent, thus enabling them, should a conflict exist, to set forth in their adverse filings the exact extent and nature of the conflict.

#### *Survey and entry of placer claims.*

The following specific instructions have been communicated in reference to this subject:

An applicant for a patent for a placer claim under the amendatory mining act of July 9, 1870, is required by law to come within the same conditions applicable to claimants of veins or lodes as prescribed by the original mining statute of July 26, 1866, and the proceedings prior to survey are the same in both cases.

After the expiration of the legal ninety days' posting and publication

of diagram and notice, proof of which must be made to the satisfaction of the register, the placer-mining claimant, when the subdivision of a 40-acre tract is necessary, may engage, under private contract, either a United States deputy, or a county or other local surveyor, to perform the work at the expense of the claimant; such 40-acre tract to be invariably laid off into four lots of equal area, either in the form of squares of ten by ten chains, or in the form of parallelograms, one side of which may be five and the other twenty chains, as will the better effect the object of the segregation; but the lines of these surveys must not be made to run diagonally to those of the regular surveys, but parallel and at right angles therewith, so as to prevent confusion in the description of the remainder of the land. Such survey must be properly sworn to by the surveyor either before a notary public, officer of a court of record, or before the register or receiver, and the deponent's character and credibility must be properly certified by the officer administering the oath.

Upon the filing of the plat and field-notes of such survey, the register and receiver will transmit the same to the surveyor general for verification and approval, who, if he finds the work to have been correctly executed, will give such 10-acre lot, *where the same constitutes the entire claim*, its appropriate numerical designation in the order of surveyed mineral claims in the township in which it is situated; and in cases where several of these 10-acre lots are contiguous and constitute *one claim*, they will not receive separate numbers for each lot, but the whole will receive *one number* in the order of surveying mineral claims in the township. The surveyor general will then mark such claim upon the original township plat on file in his office, and send an authenticated copy of the plat and field-notes of the survey to the register of the proper land office, and also to this office, as in the case of vein or lode surveys.

Thereafter, should no adverse claim have been filed, an entry will be allowed at the legal rate of \$2 50 for each acre or fractional part of an acre included in the survey; the local land officers preserving an unbroken consecutive series of numbers for all mineral entries, both of lode and placer claims; after which the case will be reported to the General Land Office, in the usual manner, for final action.

The foregoing instructions as to survey are intended to apply only to those placer claims which are upon *surveyed* lands, and cannot be entered in 40-acre legal subdivisions without interfering with the rights of other bona fide mineral or agricultural claimants on the same tract; and the local land officers are instructed in all cases to require testimony as to whether or not other claimants to any portion of the tract exist, and where such are found, to require the applicant at his own expense to cause the survey into 10-acre lots in manner aforesaid, so as to segregate his claim from the remainder; and where there are no other claimants, to require the entry to conform in its exterior limits to the 40-acre legal subdivision, in which case no further survey or plat is required.

Where there are several placer claims within the same 40-acre tract, the claimants have the option of making joint entry of the land, after proper proceedings, or of having subdivision into 10-acre lots made at their own cost, and of receiving separate patents.

When a placer claim is located upon *unsurveyed* land, a survey and plat thereof will have to be made by a United States deputy surveyor, under conditions similar to those applicable to the survey of vein or lode claims; the claimant in such case having to make a deposit sufficient to defray the expenses of the field and office work of the survey.

*Segregation of agricultural from mineral lands.*

For the guidance of the local land officers in the matter of controversies between mineral and agricultural claimants, and the segregation of agricultural from mineral lands, the following has been communicated:

The twelfth section of the amendatory mining act of 9th July, 1870, stipulates in its second proviso: "That legal subdivisions of 40 acres may be subdivided into 10-acre tracts, and that two or more persons or associations of persons having contiguous claims of any size, although such claims may be less than 10 acres each, may make joint entry thereof;" the last clause in the third proviso of said section providing that, "nothing in this section contained shall defeat or impair any bona fide pre-emption or homestead claim upon agricultural lands, or authorize the sale of the improvements of any bona fide settler to any purchaser."

The sixteenth section of this act repeals so much of the act of 3d March, 1853, entitled, "An act to provide for the survey of the public lands in California, the granting of pre-emption rights, and for other purposes," as restricts the survey of mineral lands to township lines, and provides for the extension of the public surveys over mineral as over agricultural lands; and also further provides for the subdivision, at the expense of claimants, of surveyed mineral lands into lots of less than 160 acres, which may be done by county and local surveyors.

Under the operation of this law, recognizing 10-acre lots as legal subdivisions of the public lands in mineral regions, much of the difficulty heretofore experienced in proving the mineral or non-mineral character of lands may be obviated.

Prior to the passage of this act it was necessary that affidavits should be filed as to the mineral character of *each 40-acre tract*, that being the smallest legal subdivision of public lands; and to disprove the mineral character of lands so filed upon it was necessary to establish the fact that such 40-acre tract was, as a whole, more valuable for agricultural than for mineral purposes. This it was often impossible to do, for the reason that although parties could be readily produced willing to testify that one-half or perhaps three-fourths of a given tract was only fit for agricultural or grazing purposes, yet inasmuch as a small fraction of the land was intersected by a gulch, ravine, or quartz lode yielding mineral, the value of which deposit there was no definite means of ascertaining, the deponents would be unable to testify that the entire 40-acre subdivision was of greater value for agricultural than for mineral uses.

In this way, although 30 or even 35 acres of a certain 40-acre tract might be shown to contain no mineral whatever, yet, on account of the known mineral character of the small remaining fragment of the land the bona fide agricultural claimant has been debarred from obtaining title to his claim.

Hereafter, when an application is filed at the register's office to enter land as agricultural, which has been returned as mineral by the United States deputy surveyor, or upon which affidavits have been filed alleging its mineral character, the register will, *at the expense of such applicant*, publish a *notice* of such application for thirty consecutive days in a newspaper of general circulation, published nearest to the land in question, or, if in a weekly paper, for five consecutive weeks, giving the name and address of the applicant; the designation of each 40-acre tract covered by the application; the names of any miners or mining companies whose claims are upon the land in question; the names

of the parties who filed the mineral affidavits and the date of such filing; and finally the notice will name a day, after the thirty days have expired, upon which a hearing will be had before the register and receiver to determine the facts as to the character of the land, when such witnesses as may be brought by the parties in interest will be examined, and their testimony reduced to writing; and the depositions of such witnesses as are unable to be present, from distance, infirmity, or other good cause, will be received and examined; after which the proceedings will be submitted to the General Land Office for review.

A copy of the foregoing notice must also be posted in a conspicuous place upon *each 40-acre tract* embraced in the application, for the period of thirty consecutive days, proof of which is required by the sworn statement of at least two witnesses, one of whom may be the applicant, stating where the notice was posted, the date of posting, and how long continued; and there is also required to be furnished a copy of the printed notice with the publisher's affidavit attached, stating when the same was first published, and for what length of time, and in every case where practicable, in addition to the foregoing publication and posting, *personal notice* must be served in the usual manner upon the parties who are actually engaged in mining upon the land, and upon those who filed the mineral affidavits.

On the day of the hearing, the register and receiver are required to examine the witnesses with the view of eliciting the truth as to the mineral or non-mineral character of the land; and where it is shown that a portion of a 40-acre tract is mineral, and the remainder agricultural, the testimony must clearly show what particular portion or portions of the land are actually covered by placer or quartz claims, or used in connection therewith, as fixed by local customs or rules of miners; and if, prior to such hearing, the respective mineral and agricultural claimants can, by agreement, define the proper boundaries of the mineral and agricultural lands in the same 40-acre tract, and file on the day of the hearing a diagram and description showing in what portions of the land such mines and grounds used in connection therewith are situated, stating whether the same are lode or placer claims, it will be of much service to the local land officers and to the General Land Office in making a proper award of the land.

Where an applicant claims the pre-emption right to the land he applies to enter, the register and receiver are required at said hearing to exact all the proof customary in cases of pre-emption contests as required by law and instructions, and the same rule is applicable to homestead applicants. After the hearing the register and receiver must forward all the papers filed and testimony taken, together with their joint opinion thereon, to the Commissioner of the General Land Office for review, when such an award of the land will be made as the law and the facts may justify, and in cases where further survey is necessary to set apart the mineral from the agricultural land in any 40-acre tract, the necessary instructions will be issued by the General Land Office to enable the agricultural claimant, at his own expense, to have the work done either by a United States deputy, county, or other local surveyor, as authorized by the sixteenth section of the act of July 9, 1870.

In making the survey in pursuance of the award by the General Land Office, where placer-mines exist upon a 40-acre tract, the subdivision must invariably be made into 10-acre lots as hereinbefore specified.

In case there exists a vein or lode-claim upon such 40-acre tract, the subdivision into 10-acre lots is not required by the act, and the survey in such case must be executed in such manner as will segregate the por-

tion of land actually containing the mine, and used as surface-ground for the convenient working thereof, from the remainder of the tract, which remainder will be patented to the agricultural claimant to whom the same may have been awarded, subject, however, to the condition that the proprietor of any vein or lode for which a patent has issued shall have the right to follow the same for the purpose of extracting and removing the ore therefrom, although it may penetrate or intersect the land so patented as agricultural.

Upon the filing of the plat and field-notes of such survey duly sworn to, the register and receiver are required to transmit the same to the surveyor general for his verification and approval; who will then mark out the same upon the original township plat in his office, and furnish authenticated copies of such plat and field-notes to the proper local land office and to the General Land Office, to be affixed to the duplicate and triplicate township plats respectively.

When a portion of a 40-acre tract is awarded to an agricultural claimant, and he causes the segregation thereof from the mineral portion, in the manner herein indicated, such agricultural portion is not given a numerical designation on the plats as in case of surveyed mineral claims, but is simply described as the "Fractional quarter of the ——— quarter of section ———, in township ———, of range ———, ——— meridian, containing ——— acres, the same being exclusive of the land adjudged to be mineral in said 40-acre tract."

The surveyor must correctly compute the area of the agricultural portion, which computation must be verified by the surveyor general.

After the authenticated plat and field-notes of the survey have been received from the surveyor general the General Land Office issues the necessary orders for the entry of the land, and in issuing the receiver's receipt and register's certificate those officers are governed by the description of the land given in the order from the General Land Office.

#### *Citizenship of claimants.*

In accordance with the principles enunciated in an opinion of Assistant Attorney General Smith, and the consequent ruling of the head of the Department in accordance therewith, in the New Idria mining case, as to citizenship of mining claimants, and to which reference is elsewhere made, this office revoked the regulations heretofore in force, and issued instructions to the following effect as to the nature of the proof of citizenship to be furnished by applicants for mining titles, viz:

1. Where such application is made by persons claiming to be *native-born* citizens of the United States, the affidavit of each person so claiming is required that he is such citizen, stating the place of his birth, such affidavit to be taken before a notary public, officer of a court of record, or the register or receiver of the land office where the application for patent is made.

2. Where such application is made by a person *claiming to have filed a declaration of intention to become a citizen*, he is required to file a certified copy of such declaration under seal of the court in which it was made.

3. Where such application is made by a person *claiming to be a naturalized citizen* of the United States, he is required to present his naturalization certificate, or a copy thereof, certified under seal of the court from which the original issued.

4. Where the application is made by an incorporated company it is required to present a certificate of incorporation and evidence of the

citizenship of each member or stockholder of such company, in the manner hereinbefore set forth.

5. Where the application is made by an association of persons *unincorporated*, each member of such association must furnish proof of citizenship in the manner aforesaid.

#### 23.—INSTRUCTIONS RELATIVE TO THE ASSIGNMENT OF LAND WARRANTS.

Information has reached this office that great irregularities are being practiced in the matter of procuring assignments to land warrants, by which the lawful owners thereof are induced to dispose of them at merely nominal prices; in many instances the assignments having been obtained in advance of the issue of the warrant, upon representations that it was doubtful whether the claim therefor would be allowed.

To check these practices, and protect the original warrantees as far as possible from imposition, a circular letter was addressed to the registers and receivers of the district offices, on the 9th of August last, instructing them not to receive warrants unless the assignment was indorsed upon the back thereof, except in cases where the space had already been filled by previous assignments. In such cases the last assignment is required to show, beyond question, that at the time of its execution the assignor had the warrant in his lawful possession. The salutary effect of these instructions is already seen, not only in the returns of the district land officers, but in the diminished number of warrants of the class referred to which come before this Bureau for approval.

#### 24.—REORGANIZATION OF THE CLERICAL FORCE OF THE OFFICE AND APPOINTMENT OF SPECIAL AGENTS.

When the vast extent of the public domain is taken into consideration, and when the teeming population that at no distant day must people it is anticipated; and when it is remembered that to each and every tract on which a home may be made, and that even to the very lands on which many towns and cities have been or may hereafter be built, the validity of title rests primarily in the accuracy with which the first details of transfer from the Government to its vendees are executed; the importance of exercising critical care in the adjustment of all matters pertaining to the disposal of public lands should be apparent.

There is not a home in many of the States in the prosperous valley of the Mississippi, nor in the rapidly-growing regions beyond that river, that does not depend upon the records of this Bureau for evidence to complete the chain of title by which it is held. Even from those regions of the west which have been peopled for the greatest length of time, this office is in constant receipt of applications for certified transcripts of records affecting the validity of title to lands which for ten, twenty, and even fifty years have been under cultivation.

Were every acre of land now owned by the Government sold or otherwise disposed of, there would still be ample necessity for the perpetuation of this Bureau, with a clerical force by no means small, to afford information and papers respecting the original transfer of title from the Government. In many instances the necessity for these transcripts of records arises from errors and inadvertences either in the construction of laws or in the execution of the details of transfer, both of which inevitably lead to expensive and protracted litigation.

With a view to prevent, as far as may be possible, the further occurrence of such cases, I am impelled to call your attention, with the hope that proper legislation to meet the case may be invoked, to the great importance of placing within the reach of this Bureau the means of se-



curing such clerical aid as may be equal to a proper adjustment of the important questions constantly arising before it.

It is now a difficult task to procure and *retain* clerks that can be profitably employed on the more important branches of the work of the office; and I may add that the difficulty of retaining far exceeds that of securing them, for the reason that the utterly inadequate salaries now paid by the Government too often fail to induce the more competent clerks to remain in the Bureau after becoming fully conversant with the laws and departmental rulings relating to our land system, there being always more advantageous opportunities to exercise that knowledge in legitimate pursuits outside of the office at rates of compensation with which the Government under existing laws cannot compete.

The statutory laws relating to public lands are necessarily complicated. In the construction to be placed upon them and in the adjustment of adverse claims arising under different laws, the questions of title upon which we are called to pronounce decision are sufficiently intricate to demand the best legal ability. The interests at stake are almost invariably of great moment, in most cases involving the lawful and peaceable possession and enjoyment of the lands of men struggling through poverty to secure by hard industry for themselves and families a home. To meet these questions in a proper manner, competent clerks should be employed, and this can only be done when a more liberal legislation in the matter of compensation is accorded.

The heads of the various divisions of the Bureau are charged with a responsibility second only to the head of the Bureau, and should in my opinion receive a salary of not less than \$2,500 per annum. The number of clerks of the fourth class should be increased, and to equalize it a proportionate number could be taken from the clerks of the first class. I am more inclined to make this recommendation when I consider that not only will the work be better done under a reorganization like this, but there will be an actual economy of time and money by the avoidance of errors in the performance of the work.

In the offices subordinate to the General Land Office—the offices of surveyors general, registers of district land offices and receivers of public moneys—a growing necessity exists for some new system by which a more direct control can be had of the details of business pertaining to those offices and by which any irregularities may be corrected. It is a matter due alike to the public at large and the officers concerned. A constant source of annoyance is found in the frequent complaints alleging official malfeasance on the part of the land officers, which come to us from every part of the country where the land system extends. It is but just to say that in many instances these complaints emanate from designing men or disappointed speculators, and are often utterly groundless when subjected to investigation. They nevertheless come to us in such grave shape as to require the time, trouble, and expense of formally recognizing and investigating them. On the other hand, the charges are often well founded in fact, and the protection of the parent office is invoked to prevent practices oppressive to the people and subversive of law. In either case the facilities of this Bureau should be sufficient to enable it to acquit its subordinates of charges when wrongfully made, or to fasten upon them the evidence of their malfeasance where they have been rightfully accused of such action.

Under present statutory provisions there is no adequate method by which satisfactory investigations can be made. It is true that a register can be called upon to report as to the alleged misconduct of a receiver, or *vice versa*; but the official relations of those officers are generally such as to render these investigations unreliable. Even when a special

agent is delegated to examine into alleged misconduct, which can only be done at great inconvenience and expense, he finds himself embarrassed by his want of authority to compel the attendance of witnesses. What is needed, and for which I respectfully ask, is the authority to appoint one or two special agents to be constantly in the employ of this Bureau, who may become familiar with the land laws and regulations, and whoshall, subject to orders from this office, visit the different land districts with a view to examine into and report upon the manner in which the business is conducted. A salary of \$2,500 should in my opinion be affixed to such office, and, in addition, the actual expenses of the agent while on duty should be borne. It is a system not new to other Departments of the Government, and is believed to have been productive of a salutary effect in its workings.

That such a system, if adopted in connection with the administration of the affairs of the Land Bureau, would result in subserving a good purpose I have no doubt. Not only would the General Land Office be kept in closer *rappor*t with the district officers; the officers be afforded an opportunity of explaining any false charges which might be brought against them; the people secured in their rights against the unlawful acts of bad officers; but a great desideratum would be attained in having some one to superintend the removal of district offices, the opening of new offices, and the giving of instructions to officers, when, without previous experience, they are appointed to those positions—matters which have from the foundation of the Government to the present time been productive of great hindrance to the smooth and correct working of the land system.

In changes of the officers referred to, which are frequent, the new appointees in a majority of cases bring to the discharge of their duties no experience or previous knowledge of such duties. From the very first day of their official life a pressure of business is perhaps forced upon them, compelling them to decide on cases, or to render a construction of law, which, if erroneously done, may invalidate the title to hundreds of homesteads and prejudice the rights of hundreds of citizens. The details of business, so necessary to dispatch and correctness, are to be learned only by long experience; and, before that is acquired, untold numbers of almost inextricable complications may have been made. The result is seen in the mass of cases that burden our files and consume the time of the office, a great portion of which could have been avoided if this office had possessed the facilities for sending competent persons to the spot to instruct the officers and start the machinery of their offices aright.

In the correction of the evils alluded to by the appointment of special agents as herein asked, the Government would save a very large amount over the appropriation necessary to meet the expenses, while the saving, both of money and trouble, to the public would be probably still greater.

Respectfully submitted.

WILLIS DRUMMOND,  
*Commissioner.*

The Hon. SECRETARY OF THE INTERIOR.

REPORT OF THE COMMISSIONER OF PENSIONS.

DEPARTMENT OF THE INTERIOR,  
*Pension Office, Washington, D. C., November 15, 1871.*

SIR: I have the honor to submit the following report of the transactions of this Bureau, for the year ending June 30, 1871:

ARMY AND NAVY PENSIONS.

The number of original invalid pensioners added to the rolls the past year was 7,934; widows and dependents, 8,399; making, with the number previously upon the rolls, a grand total of 207,495 pensioners of all classes on the 30th of June, 1871.

The total number for the year 1870 was 198,686, being an increase of 8,769 pensioners for the present over the previous fiscal year.

The whole number dropped from the rolls during the past year, of all classes and for all causes, was 8,251. The aggregate expenditure for this roll, for the fiscal year ending June 30, 1871, was \$33,077,383 63, (which, however, represents five quarterly payments, as hereafter explained,) as compared with \$27,780,811 81 for the year 1870.

An analysis of the gain and loss of the pension roll for the past year, together with a financial exhibit for the same period, is herewith presented.

For the benefit of comparison, the condition of the pension roll and the expenditures for 1870 are first given:

Number of pensioners.		Annual amount.	Expended during the year ending June 30, 1870.
Invalid.	{ Army .....	86, 187	\$7, 655, 749 52
	{ Navy .....	1, 334	118, 796 25
Widow.	{ Army .....	109, 552	14, 324, 664 33
	{ Navy .....	1, 613	261, 060 00
Total .....		198, 686	22, 960, 200 10
			27, 780, 811 81

The invalid pension roll has increased and lost, during the year ending June 30, 1871, as follows:

BY THE INVALID DIVISION.

	Number.	Number.	Annual amount.
Original army invalid claims allowed .....	7, 807		\$491, 905 80
Increase army invalid claims allowed .....		3, 379	170, 522 80
Original navy invalid claims allowed .....	127		11, 804 00
Increase navy invalid claims allowed .....		67	2, 985 00
Total .....	7, 934	3, 446	677, 227 60
Losses by death, re-enlistment and recovery from disability .....	2, 788		191, 241 27
Actual gain of invalid roll .....	5, 146		485, 986 33

The roll of widows and dependents has increased and lost for the year as follows :

## BY THE WIDOWS' DIVISION.

	Number.	Number.	Annual amount.
Army, allowed.....	8,292		\$1,116,156 00
Army, increase allowed.....		1,816	58,212 14
Navy, allowed.....	117		17,394 00
Navy, increase allowed.....		7	292 00
	8,399	1,823	1,194,044 14
Losses by death, remarriage, and expiration of minors' pensions..	5,463		1,209,535 28
Actual gain to widows' roll.....	2,936		*15,491 14

## BY THE DIVISION OF 1812.

Soldiers of the war of 1812 pensioned, under the act of Feb. 14, 1871.	727		69,792 00
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\* Loss.

There were upon the roll, with the increase given above, June 30, 1871-207,495 pensioners of all classes, the aggregate amount of whose pensions was \$22,804,994 29, and to whom was paid, during the fiscal year, \$33,077,383 63, as exhibited below :

Pensioners of all classes.	Number of pensioners.	Annual amount.	Paid during the year to pensioners of each class.
Invalid. { Army.....	91,290	\$8,141,735 85	\$12,304,320 37
{ Navy.....	1,377	125,233 25	190,045 52
Widows. { Army.....	112,498	14,812,551 19	20,188,409 70
{ Navy.....	1,673	257,682 00	391,342 09
Soldiers and widows of 1812.....	797	67,792 00	3,066 05
Total.....	207,495	22,804,994 29	33,077,383 63

The great increase of the amount paid for pensions during the past fiscal year (\$33,077,383 63) over that paid during the year preceding, (\$27,780,811 81,) is owing chiefly to the operations of the law of July 8, 1870, making pensions payable quarterly, under which the whole amount of pension accruing between March 4, 1870, and June 4, 1871, a period of fifteen months, became due and payable within the fiscal year just closed. To meet these payments, requisitions to the amount of \$34,805,175 15, estimated sufficient to cover the pension expenditures for five quarters, were made upon the Treasury within the year. The unexpended balance of these remittances to pension agents, together with all other funds in their hands, June 30, 1871, (see C and G, appendix,) were, by decision of the Secretary of the Treasury, under the act of July 12, 1870, required to be covered into the Treasury.

The year 1871-'72 commences, therefore, with only the net amount of the appropriations for the year, \$34,500,000, available for all pension purposes. It is probable that the \$4,500,000 of this sum, appropriated for pensions to soldiers of the war of 1812, will be insufficient to meet in the payments of this class for the fiscal year.

A more specific analysis of the pension rolls made October 1, 1871, exhibits the following facts. There were then 93,941 Army and Navy invalids, and their average age will not exceed thirty-five years. This invalid roll, classified by rank and by degree of disability, shows the following result :

Major generals.....	2
Brigadier generals.....	12
Colonels.....	136
Lieutenant colonels.....	204
Majors.....	291

Captains.....	1,823
First lieutenants.....	1,848
Second lieutenants.....	1,289
Non-commissioned officers and privates.....	88,336

Total ..... 93,941

*Degree of disability.*

Total first grade, \$25 per month.....	596
Total second grade, \$20 per month.....	661
Total third grade, \$15 per month.....	15,060
Total, \$8 per month, (for privates).....	18,682
Three-fourths, \$6 per month.....	18,224
One-half, \$4 per month.....	28,997
One-fourth, \$2 per month.....	11,592
Pensioned for service; no disability.....	129

Total..... 93,941

The following table shows the number on the invalid roll who have lost limbs in the service:

Both arms and both legs.....	1
One arm.....	5,006
Both arms.....	30
One leg.....	4,627
Both legs.....	42
One arm and one leg.....	21

Total..... 9,727

The number who have availed themselves of the benefits of the act of June 30, 1870, providing for the issue of artificial limbs or commutation therefor, are 8,918, to whom were issued as follows: Arms in kind 104, commutation 4,067; legs in kind 1,117, commutation 3,114; feet 5, commutation 51; apparatus for resection 22, commutation 538; total, 9,018.

The growth of the pension rolls during the last decade is exhibited below.

Fiscal year ending June 30.	INVALID.			WIDOWS AND DEPENDENT RELATIVES.		
	Added to the roll during each year.	On the roll at the end of each year.	Deaths, disability ceased and re-enlisted.	Added to the roll each fiscal year.	On the roll at end of each fiscal year.	Deaths, remarriage, and expiration of minors' pensions.
1861.....		4,337			4,299	
1862.....	419	4,341	415	178	3,818	639
1863.....	4,122	7,881	643	3,776	6,970	694
1864.....	17,033	22,479	1,395	22,456	27,656	1,770
1865.....	15,216	35,280	2,315	24,950	50,106	2,509
1866.....	22,863	55,652	3,111	27,924	71,070	6,330
1867.....	16,589	69,565	2,676	19,892	83,618	7,344
1868.....	9,400	75,957	3,089	19,461	93,686	9,393
1869.....	7,292	82,850	300	15,904	105,104	4,486
1870.....	5,721	87,521	1,059	12,500	111,165	6,439
1871.....	*2,681	*83,394	2,788	8,399	114,101	5,463
	107,416		18,359	154,819		45,917

\*Includes soldiers war of 1812, (727.)

The invalid roll has not yet reached its maximum, for the losses by death and ceasing of disability do not yet equal the gain from original cases.

The total number of original invalid claims received during the year is 9,553. The total number admitted during the year is 7,934, making an excess of receipts over disposals of 1,619.

The total number of original invalid cases now on file, in which no conclusion has yet been reached, is 33,182. The biennial epoch of 1871 has been marked by an extraordinary number of applications for increase of invalid pension.

The total number of applications for increase for the past year was 7,574. The character of many of these applications, and that also of many of the old pending claims, is such as to impose on this office a vast amount of labor and requires the greatest caution in their consideration.

As we recede from the war of the rebellion, many disabilities, in their nature temporary, are disappearing by recuperative energies, and the pensioner, reluctant to lose his gratuity, oftentimes tries to fortify himself by evidence, which only consumes the time and labor of the office to no purpose. In many of the later applications for original pension, it is often a matter of extreme doubt whether the disability at this distant period from the war actually had its origin in the service, so that the line of demarkation between duty to the Government and justice to the soldier is difficult to find.

#### WOUNDS AND INJURIES—DISEASES.

Herewith, (appendix, marked A,) I present a tabulated list of disabilities or diseases covering the whole number of invalid pensioners paid by the United States. They afford studies of interest to the statistician, and from them might be deduced much that is valuable to the Government in determining the diseases and wounds incident to war, and the law of the lapse of pensions. This is the first extended attempt in this direction, and though imperfect, it will afford a basis and a guide for more thorough effort and substantial results in the future.

The disabilities are presented in two great classes, injuries and diseases, the former of which is presented in Table A, and the latter in B. In the injuries are included all the forms incident to the life of a soldier, but so largely preponderant are gun-shot wounds, that practically they might have been so classed.

To have separated and presented them in groups, would have involved a greater expenditure of time and labor than would have been warranted by the object sought; and since a gun-shot wound is an "injury," while an injury may not be a gun-shot wound, it was thought best to class them all under the head of injuries, and to group them, not by the nature of the injury, but by the region of the body injured. In many instances it was difficult to determine the group to which a particular injury belonged, as often, for instance, a gun-shot wound involved both a limb and the body, and so absolute precision cannot be claimed. In the main, however, what is set forth is fact, and is as precise as such matter will permit.

The whole number of cases shown in Table A is 76,469, and in Table B 15,816, the aggregate being 92,285. The injuries are to the diseases 43 to 1. Generally, to say that the number of persons paid by the United States for disabilities resulting from gun-shot wounds is as 5 to 1 of those paid for disabilities caused by diseases, would be true.

Further analysis of Table A shows that there are on the rolls—

For injury to the head.....	5,155
neck.....	680
chest.....	3,730
abdomen.....	5,735
spine.....	871
shoulder.....	3,383
arm.....	11,953
hand.....	8,173
thigh.....	8,104
leg.....	10,918
foot.....	1,962
For single wounds.....	63,721
For two or more wounds.....	4,022
The proportion of wounds of the head to the whole number is as.....	
Neck.....	1 to 13.14
Chest.....	1 to 99.62
Abdomen.....	1 to 18.17
Spine.....	1 to 11.81
Shoulder.....	1 to 77.77
Arm.....	1 to 20.02
Hand.....	1 to 5.67
Thigh.....	1 to 8.29
Leg.....	1 to 8.35
Foot.....	1 to 6.21
Foot.....	1 to 34.53

The whole number of amputations is to the number of injuries as 1 to 10.16, or approximately (again) as 1 to 10.

The proportion of amputations of one hand is as.....	1 to 58.17
both hands.....	1 to 1745.20
one arm.....	1 to 2.05
both arms.....	1 to 272.69
one leg.....	1 to 2.13
both legs.....	1 to 242.39
one foot.....	1 to 73.94
both feet.....	1 to 793.28
leg and arm.....	1 to 545.37

The disabilities shown in Table B are classified and named by the system of classification and nomenclature of diseases now in ordinary use. In them, as in grouping the injuries, some difficulty is incurred in particular cases to determine the class to which they belonged; but in the diseases, as in the injuries, it is believed the facts are presented in the main as they exist.

The proportion of diseases of the brain and nerves to the whole number is as.....	1 to 10.32
Digestive system.....	1 to 4.44
Respiratory system.....	1 to 6.75
Genito-urinary system.....	1 to 33.37
Circulatory system.....	1 to 11.20
Fibrous bony, and, muscular system.....	1 to 7.04
Absorbent and excretory system.....	1 to 6.25
From miscellaneous causes.....	1 to 21.40

The marked feature of the table is seen in the exceedingly large ratio of the cases of chronic diarrhœa, which are more than 75 per cent. of

the diseases of the digestive system, and more than 20 per cent. of all the disabilities resulting from disease.

The next disability in numerical order, as shown by the table, results from disease of the eye, and constitutes about 11 per cent. of all. Under this heading are included all the ordinary diseased conditions to which the eye is subject, amaurosis, iritis, cataract, &c.

Under the head of chronic rheumatism 1,385 cases are shown. These constitute about 9 per cent. of all the disabilities. The number of cases of phthisis is 1,045, or about 6 per cent. of all.

These four disabilities, chronic diarrhoea, disease of eye, chronic rheumatism, and phthisis, aggregate 7,457 cases, or about 50 per cent. of the entire number of disabilities.

The whole number of pensioners paid on account of hernia is 3,183. This is to the whole number paid for injuries as 1 to 23.29, or 4.29 per cent.

It is not improbable that a considerable proportion of these cases are fraudulent, despite the extraordinary care exercised to prevent their enrollment. Still it must be remembered that this is an injury to which a soldier is peculiarly liable.

There are many other points of view from which both these tables might be profitably analyzed, but as in this attempt at analysis no effort has been made at any scientific or professional deductions, it is respectfully submitted in the hope that it may serve the purpose for which it was intended, viz: to give a general view of the disabilities on account of which the Government of the United States pays its thousands of pensioners.

#### WIDOWS AND DEPENDENTS.

The whole number of unadjudicated claims of widows, children, and dependent relatives on file at the close of the fiscal year 1870, was:

Under the late war, Army acts.....	32,580
Under the old war, Army acts .....	2,179
Under all Navy acts.....	819
Total .....	<u>35,578</u>

To the above claims there were added during the last year:

Under late war, Army acts.....	9,463
Under old war, Army acts.....	134
Under all Navy acts.....	165
Total .....	<u>9,761</u>

Of all claims filed there were finally adjudicated during the year:

Under the late war, Army acts, admitted .....	8,150
Under the late war, Army acts, rejected .....	1,169
Under the old war, Army acts, admitted.....	133
Under the old war, Army acts, rejected .....	37
Under all Navy acts, admitted .....	117
Under all Navy acts, rejected .....	25
Total admitted.....	<u>8,309</u>
Total rejected.....	<u>1,231</u>
Total disposed of.....	<u>9,540</u>



The whole number of claims on file at the close of the last fiscal year was:

Under late war, Army acts.....	32,591
Under old war, Army acts.....	2,144
Under all Navy acts.....	868
Total.....	<u>35,597</u>

With regard to the old war claims, it should be stated that many of them will never be further prosecuted, and few admitted; steps have been taken to eliminate them from the regular files.

There are 114,690 Army and Navy widows and dependents on the rolls, divided as follows:

Minors, pensioned in their own right, 31,654, all of whose pensions will expire by limitation by 1880-'81. Minors of officers, 1,056.

Dependent mothers, 22,654; fathers, 1,913, whose average age appears to be forty-eight years; and dependent brothers and sisters, 80.

Widows, 34,088, with 71,734 children, and 23,245 without any children, and whose average age appears to be thirty-three years.

The roll of widows and dependents, as far as annual rates are concerned, has reached its maximum. There are active causes operating to reduce this roll, such as the remarriage of widows, and minors reaching the age of sixteen years.

For the first time since the pension act of 1862 was passed, more claims have been disposed of by this division of the office than were received during the year. And unless new legislation should materially change the ratio of new claims, the reduction will now proceed with increasing rapidity.

#### THE AVERAGE PENSION.

An examination of the rolls develops the following facts as to the average pensions:

The invalid Army-roll averages \$8 92 per month; widows and dependents, \$12 65.

Navy invalids, \$9 10; Navy widows, \$15 40. The average pension for all classes, \$10 99.

As a total pension for a private is but \$8 per month, this rating appears extraordinary, and the result was unexpected.

The solution of this problem, so far as the invalid Army and Navy pensions are concerned, lies in the act of June 6, 1866, which establishes the most liberal rates for serious disabilities; and those entitled have not been slow to avail themselves of this generous beneficence.

As provided by this act there are no less than 15,000 of the third grade (\$15 per month) already on the rolls.

The high average of widows' pensions is explained by the liberal provisions of the act of July 25, 1866, which grants \$2 per month additional for each child under sixteen years of age.

#### NAVY FUND—THE RIGHT OF CERTAIN NAVY OFFICERS TO PENSIONS UNRECOGNIZED.

Navy invalid pensioners have heretofore been paid under the act of July 17, 1862, (United States Statutes, vol. 12, page 607,) out of the Navy pension fund, without any appropriation. The passage of the act of July 11, 1870, (United States Statutes, vol. 16, page 221,) requires the Secretary of the Navy to submit to Congress annually an estimate of



Total rejections.	{ Survivors .....	534
	{ Widows .....	202
		<hr/> 736
Total disposals.	{ Survivors .....	6, 870
	{ Widows .....	1, 001
		<hr/> 7, 871
Percentage of rejection to admission .....		.1016
Number of claims pending .....		24, 174
Number of claims in which action has been had: Survivors, 17,000; widows, 3,000 .....		20, 000
Number of claims awaiting evidence from departments and claimants .....		12, 139
Number of claims awaiting action .....		11, 945

*Statement showing cause for rejection of claims filed under act of February 14, 1871, war of 1812.*

Causes for rejection.	Survivors.	Widows.	Total.
Insufficient service, (less than 60 days) .....	436	101	537
Death of claimants while claim was pending .....	58	24	82
Miscellaneous causes .....	40		40
Marriage subsequent to treaty of peace, (February 17, 1815) .....		65	65
Remarriage after soldier's death .....		12	12
Total .....	534	202	736

*Statement showing the probable amount required to pay all pensions granted under the provisions of the act of February 14, 1871.*

Total number of enlistments of all kinds .....	527, 654
Total number who served 60 days and longer .....	296, 916
Number now surviving, (by comparison with results under revolutionary acts) .....	40, 133
Less rejections, 16½ per cent, (estimated) .....	6, 639
Total number of pensioners, (estimated) .....	32, 444
Their average age at passage of act .....	79 years.
Expectation of life, (Carlisle, Encyclopædia Britannica, page 560) ..	5. 81
Average amount paid each pensioner .....	\$557 76
Amount required .....	\$18, 095, 855 44

The percentage of rejections is enlarged over that shown in Table First, to include the increased number rejected by reason of the death of claimants, which, as time elapses, will more rapidly occur.

By the result of the labor of this division to this date, (October 14th,) it is believed that the whole work can be completed in eighteen months, requiring, in all, twenty-four months from the organization of the division in May, 1871, when it is probable that the remnant of the work can, without detriment to other interests, be merged in that of the regular force of the Bureau.

#### REVOLUTIONARY PENSIONS.

There are no longer any surviving revolutionary soldiers borne upon the pension-rolls.

Of widows of revolutionary soldiers, who were married prior to January 1, 1800, there were on the pension-rolls June 30, 1871, 49; of those married subsequent to January 1, 1800, 585, making a total of 634.

The number in 1868 was 888; in 1869, 887; in 1870, 727; and there now remain but 634 relicts of revolutionary soldiers receiving pensions.

Widows of soldiers who served in wars subsequent to the Revolution and prior to the rebellion, 1,214.

#### BIENNIAL EXAMINATIONS.

Under the act of Congress approved March 3, 1859, invalid pensioners, with specified exceptions, are required to be examined every two years as to the continuance and degree of the disability.

This period, as fixed by law, again returned on the 4th day of September last. The results of this examination are not apparent, as the returns have not yet been received at this office. But the sound policy of biennial examinations is fully established by the experience of the Bureau, and it is believed that the aggregate results of the recent examination will exhibit a fair reduction in the invalid rolls by reason of the decrease or discontinuance of disability.

#### EXAMINING SURGEONS—MEDICAL DIVISION.

There are now upon the roster 1,354 examining surgeons. The convenience of the pensioners and professional qualifications are the requisites to be considered in making these appointments. Liberal views have prevailed in selections from the different schools of physicians, which are believed to be in nowise detrimental to the interests of the service.

The functions of such medical men as we employ pertain only to pathology, anatomy, physiology, and general surgery, and as the paths of the different schools do not diverge until they reach the consideration of remedial means and agents, so far as the purposes of this office are concerned, there need be no cause for collision.

While by far the greater number of our examining surgeons seem disposed to act with personal and professional fidelity, yet, in the appointment of so large a number, scattered over so great an extent of territory as is necessary for the convenience of pensioners, incompetent and sometimes unscrupulous men obtain the position; others are indisposed to act with zeal and thoroughness, because of the alleged insufficiency of the fee allowed by law. These causes combine to operate adversely to the character of great numbers of medical certificates returned to this office. The interests involved are the ratings of the pensioners, and the pension expenditures of the Government.

In order, therefore, to multiply the safeguards against error, ignorance, and dishonesty, which affect both the right of the pensioners and the interests of the Government, there has been established in this Bureau a medical division, composed of competent surgeons, whose duty it is rigidly to inspect all returned certificates and to correct and adjust all medical questions, under the supervision of the Commissioner. The system is of the utmost importance and practical utility, and deserves, and I trust will receive, legislative recognition.

The meagerness of the fees of examining surgeons has become the subject of common and well-grounded complaint. Experience is teaching this office that, if Congress does not provide a more just and adequate compensation for the professional services rendered, there is danger that this important work will fall into the hands of those who are either incompetent or seek the position from unworthy motives. The tendency is now in that direction, and some of the best surgeons of the country are only retained in the service by the personal solicitation of the Commissioner, and others, in the hope that Congress would apply the appropriate remedy.

If the high order of professional ability and personal qualification absolutely essential to a faithful performance of the duties involved are to be had, they must be paid for. The fee now fixed by law is \$1 50 for an examination of each applicant or pensioner. This, divided among three surgeons generally constituting a board, is but 50 cents each. The interests involved to the Government is a pension to the applicant for life, and sometimes large arrears. The surgeons must leave their daily practice, go to a specified place, strip and thoroughly examine the applicant, make a written diagnosis of the case, report it to the pension agent and to this Bureau, and enter the same upon the journal they are required to keep. All this is to be done for the pittance of 50 cents to each surgeon. Experienced and competent surgeons cannot be secured for such remuneration. It is absurd to suppose it. In no other branch of the service, civil or military, is so small an allowance meted out for professional labor. The evils of the present system are indicated with the earnest hope that Congress will grant such compensation as will prevent the necessary medical examinations from passing into the hands of those utterly incompetent or unworthy.

I would recommend that for each examination by one examining surgeon there be allowed the sum of \$2. For each single examination by a board of three or less, \$1 for each member of the board present and participating in such examination. The law should expressly prohibit more than three surgeons in the organization of a board, as more than that number are cumbersome and unnecessary. For special examinations, such as may be found requisite from time to time, \$3, with reasonable mileage, should be allowed. These fees are more than 100 per cent. less than those charged by the profession for equal or similar services in their daily practice.

#### BOUNTY-LAND.

The whole number of bounty-land warrants issued during the past year was 2,588, representing 406,160 acres of land. A detailed statement of the same is here given :

Mexican war.	Warrants.	Denom- ination.	Acres.
Act of February 11, 1847 .....	2	160	320
Act of 1850 .....	2	80	160
Act of March 3, 1855 .....	2, 412	160	365, 920
Act of March 3, 1855 .....	131	120	15, 720
Act of March 3, 1855 .....	50	80	4, 000
Act of March 3, 1855 .....	1	40	40
Total .....	2, 588	.....	406, 160

There have been 3,078 applications for bounty land received during the year, and of these, 711 have been rejected upon the ground that warrants had already issued to the proper parties to the full amount to which service entitled them.

The following statement shows the number of warrants issued through a decennial period : in 1861, 5,341 ; 1862, 1,636 ; 1863, 602 ; 1864, 1,812 ; 1865, 1,161 ; 1866, 406 ; 1867, 954 ; 1868, 1,077 ; 1869, 1,650 ; 1870, 1,758 ; 1871, 2,598.

It exhibits a comparative suspension of applications during the late war, with gradually increasing activity since. Of old suspended claims unadjusted by reason of insufficient testimony, there are 63,088. scarcely to be expected that any considerable proportion of these ca

be sustained by essential proof, as the evidence itself, if it ever existed, generally disappears with the death of the party interested. I regret to say that experience daily teaches us to look upon many cases, now presented, with grave suspicion. Unjust and incomplete claims are bought by unscrupulous agents, for trifling sums, and are completed by an abuse of a privilege granted by authority of the third section of the act of May 17, 1856, admitting parol evidence to establish a claim when no record evidence exists. By stringent rules and regulations this Bureau has sought to prevent these wrongs. But the only complete protection will be found in the repeal of the section to which reference has been made.

The total amount for which bounty-land warrants have been issued since the organization of the Government is 73,932,451 acres, which, estimated at \$1 25 per acre, amounts to \$92,415,563 75, as exhibited below :

	Number of acres.
Act of September 16, 1776, revolutionary .....	2, 095, 120
Act of February —, 1801, Canadian refugees .....	57, 060
Scrip acts of 1830, 1832, 1833, 1835, and 1852 .....	2, 459, 511
Act of August 10, 1790, Virginia military district, (Ohio) .....	3, 669, 848
Act of May 6, 1812, war of 1812 .....	4, 846, 240
Act of March 5, 1816, Canadian volunteers .....	75, 738
Act of February 11, 1847, Mexican war .....	13, 207, 160
Act of January 26, 1849, special .....	1, 280
Act of September 28, 1850 .....	13, 165, 730
Act of March 22, 1852 .....	603, 920
Act of March 3, 1855 .....	33, 660, 000
	<hr/>
	73, 932, 451
	<hr/>

In addition to this amount, under the act of February 11, 1847, 2,729 certificates were issued in lieu of land-warrants, amounting to \$238,400, which makes the total aggregate value of grants \$92,653,963 75.

The aggregate amount of pensions paid by the Government from its organization (see Table I, appendix) to June 30, 1871, is \$252,670,412 77. Total amount of pensions and bounty land, \$345,324,376 52.

#### SPECIAL INVESTIGATIONS.

There is no infallible test as to the right or justice of a pension that can be applied in this office pending its consideration. Every compliance with law, every requirement of evidence, every condition essential to the completion of a case under the best rules and regulations that have yet been devised, may be had, and yet the claim admitted be fraudulent. The fraud must be looked for behind the papers themselves, and on the ground where they were prepared.

As suggestions leading to the detection of fraudulent pensions most generally reach this office from the vicinity of the pensioner's residence, where he is well known, it would appear that if the Commissioner was authorized to publish a list of the pensioners in the several congressional districts, or at the different agencies, each pensioner would have to confront his neighbors and the public as to his right to pension. If it was without merit the fact would soon be disclosed. Such a policy would serve to protect and honor the deserving, and assuredly lead to the exposure of those whose claims to the charity of the Government were ill-founded or fraudulent.

I would, therefore, respectfully ask that Congress authorize the Commissioner to publish the roll of pensioners, in such manner and in such

places as shall appear to be most advantageous. If this plan be adopted, the present system, as authorized by the fourth and eighth sections of the act of July 4, 1864, should be continued as correlative thereto.

By virtue of the authority of the act above cited, systematic and determined effort has been made to prevent the consummation of intended frauds, to remedy abuses prejudicial to pensioners, and to bring to justice the guilty. A fair measure of success has been attained, and the rolls relieved of many undeserving pensioners. By means of this service three hundred and one persons have been dropped from the rolls during the year, while a still greater number are now under examination; thirty-two indictments have been found against unscrupulous attorneys and agents, nine of whom have been prosecuted to conviction; five are fugitives from justice, while other cases are still pending in the various district courts.

As a simple matter of economy the pecuniary saving to the Government very far exceeds the cost of the service, while it acts preventively by keeping the evil in check. The work of the office in this direction is growing into a definite system, with constantly increasing advantage to the Government. I earnestly recommend that at least \$50,000 be appropriated to this special service.

#### PENSION AGENCIES.

There are now fifty-eight disbursing agencies. The invalid agency in New York City has been consolidated, by Executive order, with that of the widows and dependents. One new agency has been established at Vicksburg, Mississippi, and one abolished, that at Fort Gibson, Indian Territory. No further increase of the number of agencies now seems to be demanded for the convenience of pensioners. A list of United States pension agents, corrected to November 1, 1871, will be found in the appendix.

#### ABSTRACTS OF THE DECISIONS OF THE SECRETARIES OF THE INTERIOR.—CODIFICATION OF PENSION LAWS.

There are upon the statutes no less than forty-four acts and supplementary acts relating to pensions. In some there is contrariety of provision; not unfrequently there is ambiguity of expression; and in some cases a strict construction would defeat the obvious intention of the law. These embarrassments have resulted in the fact that opposite views of certain provisions have been taken by different heads of the Bureau, and sometimes by different heads of the Department.

In view of these facts, it seems desirable that all the needful provisions of past legislation, cleared of that which is doubtful, contrary or cumbersome, should be codified into one act.

The policy of the Government to its pensioners has now become clearly established; the rulings of the Department have placed the Bureau upon a uniform course of action, and it now only remains to consolidate the scattered and confused laws in accordance with such policy and rulings, and we shall exhibit a most liberal, consistent, and uniform pension system. No additional or more liberal legislation is recommended.

I have, with great care and labor, prepared an abstract of all the decisions of the Secretary of the Interior, touching pensions and bounty-land, covering the past decennial period. It was necessary, in order to produce uniformity of action in this office. This is being supplemen-

by all rulings and orders of the Commissioner, in like form, which have been scattered among the various cases of which they formed a part. When the whole is completed and in the hands of the clerical force it is believed that harmony and unity of action in the work of this Bureau will be attained.

#### STATISTICAL TABLES.

With care and labor, various statistical tables have been prepared, believed to be of great usefulness, which will be found under appropriate headings, appended to this report.

A table exhibiting the amount of pensions paid by the Government each year, from 1791 to the present time, together with marginal notes, explanatory of the fluctuating amounts, will be found in the appendix, marked I. So elaborate a pension-table, exhibiting graphically the development and growth of the Government's liberality towards its brave defenders, has never before been prepared or published.

I have also prepared a table showing the entire number of soldiers who have served in the armies of the United States, during its several wars, which will prove of essential value, and is correlative to the one above mentioned. It will be found in the appendix, marked K. Also, a table stating the number of persons who have been pensioned under special acts. It is marked L.

#### GENERAL REMARKS.

The general policy of the Bureau in the administration of the pension laws has been to adopt that liberal construction which is the manifest letter and spirit of the statutes themselves; and while forbearing to impose upon the beneficiaries of the Government any unreasonable or unwarrantable requisitions, yet, on the other hand, relaxing nothing of what the law absolutely demands, and exacting a rigid compliance with such rules and regulations as are deemed essential to guard against the admission of fraudulent or improper claims. In estimating the amount of work accomplished during the year, due consideration must be given to the fact that the labor required in the adjudication of claims has been largely increased by new legislation, repeated modifications of old acts, necessary changes in the ruling resulting therefrom, and the additional fact that many of the claims now pending are old and difficult, requiring more time and care to establish or reject them. More exacting and rigorous demands have been made of clerks in sifting testimony, in the care and promptitude with which correspondence is conducted, and in the completeness with which briefs are prepared. Taking into consideration these facts, I feel justified in the belief that at no former period was the work of this Bureau greater in amount, or more perfect in character.

There has been an increase rather than a diminution in the general business of the office. There is, however, no demand for additional force; but it is highly desirable that it remain at its present standard.

The brief period during which I have been charged with the control of this Bureau is hardly sufficient for me to have matured just estimates of all those employed in its service. I feel assured, however, that the clerks, as a body, may be justly commended for faithfulness and efficiency in the discharge of their duties. The promotions, which from time to time I have recommended, have been solely upon the ground of merit. The daily discharge of official duty is in itself a competitive



examination. The record of each clerk is faithfully kept, with consolidated monthly statements of the same. From the highest upon the roll, all things considered, the recommendations for promotions have been invariably made. I shall not depart from this policy.

I take great pleasure in saying, that in the discharge of my official duties I have had the hearty co-operation of the chief clerk and of the chiefs of the respective divisions. Their promptitude, fidelity, and conscientious performance of duty are worthy of remark in this report.

Very respectfully, your obedient servant,

J. H. BAKER,  
*Commissioner.*

Hon. COLUMBUS DELANO,  
*Secretary of the Interior.*

## REPORT OF THE COMMISSIONER OF INDIAN AFFAIRS.

DEPARTMENT OF THE INTERIOR,  
OFFICE INDIAN AFFAIRS,  
November 15, 1871.

SIR: The duty of making the usual annual report of this Bureau having devolved upon me as Acting Commissioner, by reason of the resignation of General E. S. Parker in July last, and of the continued vacancy in the position of Commissioner of Indian Affairs up to the present time, I have the honor to present herein a summary of the affairs of this branch of the public service since the date of the last annual report.

In accordance with what is so generally known as the Indian policy inaugurated by President Grant, it has been, during the past year, the aim of the Department to secure, in the administration of affairs under its charge, the greatest good and best results practicable. Much has been accomplished by intrusting to men of good standing and moral character the responsible offices of superintendents and agents; by earnest endeavors, through conciliatory measures, rather than by force or threatenings, to promote order and the interests of peace with the more intractable and hostile-disposed tribes; by seeking to inspire the confidence of the Indians in the Government, by dealing fairly and liberally with them, and observing faithfully and promptly the treaty stipulations and provisions made by law for their benefit; and by encouraging every disposition and effort on their part to better their condition, by whatever means would tend to that end. As a result may be adduced the prevalence generally of peace with tribes who have hitherto been in open hostility to the Government; the marked and gratifying change in the views and feelings of many of their members in regard to the necessity of abandoning their roving habits, and of establishing themselves upon reservations, where they can be properly cared for and civilized; the improved state of other tribes who have long been friendly; and the efficient and judicious management, except in a very few instances, by the officers of the Department of the trusts committed to them. This condition of affairs, it is submitted, will warrant the assertion that the conduct of the service the past year has been wise, prudent, and measurably successful, and affords sufficient reason for indulging the hope of the early accomplishment of the beneficent designs of the Government toward the Indian race.

While, however, good order and peace have been maintained ar

most of the tribes, disturbances and outrages have occasionally occurred, which will probably be the case until the parties who originate them are brought under proper restraint and influence. A spirit of lawlessness, disaffection, and even of hostile intent, still exists among some of the nomadic tribes, which, it is not unjustly apprehended, is engendered and fostered often by white persons or citizens from sinister motives. The Indians most difficult of management, and who have caused the greatest trouble during the past year, are certain bands of Apaches in the Territories of Arizona and New Mexico, and the Kiowas and Comanches of the Indian Territory. Those in the first-named Territory, warlike in their disposition from time immemorial, have changed but little, and most of them are still under the surveillance of the military, at whose hands they have at times suffered severely, in consequence of their numerous murders of citizens and frequent depredations. Of late, indications of a better feeling on the part of quite a large number of these Indians have been manifested, and they have expressed a desire or willingness to settle upon reservations and peaceably yield themselves to the control of the Government. A considerable body of them, in the earlier part of the year, had gathered in the vicinity of one of the military posts in the Territory for that purpose; but, unfortunately, an occurrence shortly afterward took place which, in a measure, dissipated the prospects that were becoming so favorable—aroused apprehensions that they were to be wrongfully dealt with, and led to the manifestation of a determined hostile spirit on the part of some of their leaders. I refer to the massacre, at Camp Grant, of a large number of defenseless women and children, and a few men, by an armed party of citizens of Mexican origin, and some Papago Indians, an account of which is fully set forth in the accompanying documents to this report, marked A.

The Apaches of New Mexico, more particularly those known as the Southern or Gila bands, have been very troublesome, causing, by their frequent depredations and outrages, great loss and injury to citizens of that Territory. So exasperated had these citizens become, that they determined to wage a relentless warfare against the disturbers of their peace and depredators upon their property. For this purpose an organization was effected, and resolutions passed declarative of its intentions. Better counsels, however, prevailed, as the objects and intentions of the organization have not been carried into effect, nor has any effort been made to that end. Popular feeling in New Mexico appears to be set against the noted chief of the Apaches, named Cochise, who, with his followers, in his mountain recesses and haunts difficult of access by troops, seems to have set at defiance the power exerted for his capture and subjugation. Deeming it practicable to induce this chief and his people to be friendly, strenuous efforts have been made by this Department to get him to visit Washington, but, so far, without avail. However, recent advices represent favorably his disposition to comply with the wishes of the Government—he having come in, with his followers, to a point twelve miles from Canada Alamosa, where a number of Apaches have been, for a year or two past, under the charge of an agent of this Bureau, and pledged himself to keep the peace, and to use his influence and efforts to gather all roving Apaches upon a reservation. There is now a better prospect of peace with these Apaches than ever, and it is confidently expected that the steps which are being taken to insure this result will be eminently successful.

With a view to ascertain the condition of the Apache bands both in New Mexico and Arizona, and to provide for their future by establishing them in suitable homes, under proper regulations and restrictions, Hon. Vincent

Colyer, secretary of the board of Indian commissioners, by directions from you, dated 21st July last, visited these Territories; and, after some time spent in communicating with some of the chief men of the Apaches, and in examining localities that might be desirable for Indian reservations, the following places were selected by him and reported to the Department, viz: Tularosa Valley, in New Mexico, for the Mimbres and Coyotero Apaches of that Territory; Camp Apache, in the White Mountains, Arizona Territory, for Coyotero and Chilcow Apaches; Camp Grant, Arizona, for Arivaypa and Pinal Apaches; and Camp Verde, in the same Territory, for the Mohave Apaches. He also requests that temporary asylums be established at Camps McDowell, Beal Springs, and Date Creek, Arizona, where the Tontis, Hualapais and western band of Mohave Apaches may be protected and fed until such time as it shall be found practicable to remove them to one of the above-named reservations. Peaceably established on the reservations indicated; afforded the means of subsistence, and provided with aids for their instruction in agriculture and other industrial pursuits, it is believed that the citizens of New Mexico and Arizona will have but few occasions for complaint against these Indians hereafter. For more particular information regarding them, reference is made to Mr. Colyer's communications respecting his mission to New Mexico and Arizona, embraced in the report of the board of Indian commissioners herewith, marked A, and to the reports of Superintendents Pope and Bondell, and Agent Piper, numbered 32, 27, and 37.

In regard to the Kiowas and Comanches, referred to as among the most troublesome of the tribes, there is but little improvement in their behavior to report. A goodly number have remained upon their reservation, and conducted themselves in an orderly way; but many of them have proved, as hitherto, false to their promises, and have come far short of the expectations indulged that they would cease their raidings and crimes. The past year has marked their history with gross outrages, and there would doubtless have been a serious war inaugurated by them but for the watchfulness of the military and the agent in charge of their agency. Lenient measures and forbearance toward these restless and war-loving spirits appear apparently to have no effect in restraining their passion for plunder and war, and a severe treatment would seem to be the only wise and proper course to pursue to compel right conduct on their part. The arrest, lately, by the military, and the trial and conviction, with a sentence of death—but which has been commuted to imprisonment for life—in a State court of Texas, of two of their prominent chiefs, guilty of murder and robbery, will, it is believed, have a salutary effect upon the tribe; and action of this character, promptly taken, can but tend to lessen greatly the number of crimes for which these Indians are notorious, if not wholly prevent them. It is a question for consideration whether a like treatment would not have the effect to deter the vicious and unlawful of other wild tribes from similar conduct; and it is suggested that all Indian agents should be instructed, upon the commission of a crime by an Indian or party of Indians under their charge, coming to the knowledge of such agents, to arrest the offender or offenders, calling upon the military for assistance, if need be, and deliver them up for trial by the proper Federal or State court having jurisdiction in the case.

A large body of Apaches, numbering, it is reported, about one thousand, ranging in the Staked Plains, Texas, not attached to any agency, and who have never been on an Indian reservation, recently sent in word that they desire to cease raiding, and to come in and be established

upon the reservation for the Kiowas and Comanches in the Indian Territory. With your approbation, directions have been given to the proper agent to make arrangements necessary to that end. When this band shall have been removed from Texas, there will be but comparatively few Indians residing within the limits of that State.

Of the tribes of late years hostile and difficult to manage, but now quiet and disposed to be friendly, are the Arapahoes and Cheyennes. No serious difficulties have arisen with them during the past year, and their conduct has been quite commendable. It is believed the visit of several of their prominent chiefs to this city last spring had a great tendency to conciliate the disaffected of the tribes, and will doubtless be productive of a better understanding of their treaty obligations, and tend to convince them that a strict and faithful compliance therewith will be to their best interests. Also of the Sioux Nation, in Dakota Territory, comprising a number of powerful bands, heretofore formidable in their opposition to the Government, it may be observed that they are in a good degree peaceable. Those upon the reservation selected for the whole nation are quiet; many of them are friendly-disposed, and evince a willingness to abandon the hunter-life and become tillers of the soil. While the Government continues to provide for the wants of the Sioux, feeding and clothing them—means by which they are kept in a better humor than they otherwise would be—no outbreak or disorder of any extent need be apprehended. Some trouble is anticipated on account of the suspicion with which some of them look upon the projected Northern Pacific Railway being run through what they claim to be their country; but as yet no decided demonstration of opposition has been made by them. The Sioux of the band under the noted chief Red Cloud have for the time being a temporary location north of the Platte River, about thirty miles south of Fort Laramie, Wyoming Territory. It is intended, when it can prudently be done, to establish them at an agency somewhere within the limits of the reservation designated for the whole nation. Part of this band, dissatisfied with Red Cloud, and refusing to recognize him as their leader, have gone into Montana, having for their chief Sitting Bull. Unless carefully managed, these seceders, reported to have eight hundred lodges, may cause great trouble to the Government. Besides these Sioux roaming in Montana, without constraint, there is another large body of them in the same Territory, living in the neighborhood of their hereditary enemies, the Gros-Ventres and Assinaboines. They were, at the massacre in Minnesota of 1862, driven from that State, belong to no agency or reservation, and claim the right to follow the buffalo wherever they can find it. By the judicious management of the Department and its officers in Montana these Indians have been thus far kept quiet. They are apparently determined to remain upon the reservation provided for the Gros-Ventres and Assinaboines, and, so long as it is expedient to allow them to be there, must be supplied with the necessities of life, or difficulties with them will inevitably follow. It is earnestly recommended that Congress should make the requisite appropriations for their proper care and subsistence by the Department. It may be well here to give the military view as to the disposition of the Sioux Nation, and especially the wandering portions of it, and as to the care to be exercised over them. One of the highest of the authorities in that branch of the service is of the opinion that, unless the civil Department can control the Sioux, hostilities will be again renewed, which the military may not be able for the time being to repress, with the limited power at its command; and it is suggested

that a conciliatory course, under the circumstances, be pursued, and a liberal provision made for the wants of these Indians.

The Indians in Kansas, Nebraska, those in the Indian country, excepting the Kiowas and others before mentioned, and in New York, Michigan, Minnesota, and Wisconsin, who have been long in contact with the whites, and under influences favorable to their advancement and civilization, occasion but little trouble to the Government, or its citizens, by whom they are surrounded. Many are well educated, and the possessors of good, cultivated farms, and others managers of a prosperous business. A large number of those residing in Michigan and Kansas, as also the Winnebagoes in Minnesota, have become citizens, and the probabilities are that most of those remaining in Kansas and Nebraska will, in a few years, if not removed to the Indian country and there brought under a territorial form of government, become merged into the citizen population and their tribal existence be extinguished.

Other Indians, as in Oregon, California, Nevada, and the several Territories, with the exception of the wilder and unfriendly part of them, hereinbefore noted, have been quiet and peaceable; but there is no very marked change in their condition to report. A few Seminoles yet remain in Florida, and quite a large number of Cherokees yet reside in North Carolina and several of the adjacent States. Measures are now being taken to remove the latter to the country of their brethren in the Indian country west of Arkansas.

The aggregate of the population of Indians within the boundaries of the United States, including Alaska, is estimated at 350,000. By the statistics furnished, regarding those under the care of agents, it is shown that with nearly all the tribes there is a decrease in number from year to year, arising from causes so well known, and often repeated. With those most advanced in civilization there is, however, a perceptible increase. The true policy of their preservation from utter extinction, before many years pass, it is generally admitted, is to prepare them as rapidly as possible to assume the relation of citizenship; by granting them increased facilities for the education of the young; by habituating them to industrial pursuits, and by the incentive to labor incited by a sense of ownership in property, which an allotment of their lands in severalty would afford, and by the benign and elevating influences of Christian teachings.

One of the most potent agencies for the civilization of the race is that of education. The means provided under treaty stipulations, and by special appropriations by Congress, are found to be entirely inadequate for the establishment and maintenance of any larger number of schools. Where, in many cases, buildings are required to be erected for school purposes, the funds applicable are barely sufficient for that object, so that when they are furnished and operations have commenced, other requirements for a successful carrying on of the schools cannot be met, and the undertakings either prove a failure or produce results scarcely appreciable. The \$100,000 appropriated by Congress July the 15th, 1870, for educational purposes among tribes *not provided* with means therefor, has not yet been available, to any considerable extent, it being found difficult to make a satisfactory distribution of the same. Under the act appropriating said sum the money is to be expended among the tribes having no educational fund. Many of these tribes are wild and roving, without any fixed habitation where schools could be permanently established; others are opposed to schools; and others again manifest no desire to have them. In order to utilize this gift of the

Government to the best possible advantage it is respectfully recommended that legislation be had by Congress giving discretionary power to the Secretary of the Interior to distribute the fund at such times and among such tribes as he shall be satisfied will produce the most beneficial results, whether the tribes have any other provision of this character or not.

Since the date of the last annual report of this office, by direction of the President of the United States, the office of several superintendents has been discontinued and the agents subordinate thereto now report direct to the Indian Bureau. No detriment to the service has been caused by this change. The offices so discontinued number six, and a considerable sum, which was expended on account of salaries and office, incidental and traveling expenses, is thereby saved to the Government. The number of agencies, including those denominated special and sub-agencies, is at the present time seventy-four, the incumbents of which receive a compensation of \$1,500 per annum, except three in California who receive \$1,800 each, and the sub-agents, who receive \$1,000 per year.

The existing laws regulating trade and intercourse with the Indian tribes, enacted many years ago, (1834,) and which were adapted to the time and to the condition of affairs among the Indians, are judged now to be inadequate to the purpose, or are so defective as to fail to secure the Indians against the encroachments of the whites, and the introduction of evils which have so much contributed to their demoralization and led to troubles and difficulties between them and the whites. A revision of these laws is very much to be desired to meet the changed circumstances now surrounding the Indians, arising out of the building of railroads through their lands, the rapid advance of white settlements, and the claims and rights of squatters, miners, and prospecting parties; also to provide some definite course to be pursued in cases of crimes committed by Indians against Indians; to express clearly the right of citizens to trade with Indians; and to define more specifically what is to be understood now as Indian country, especially as to the application of the term to the Territories of New Mexico, Utah, and other portions of country acquired by the United States from foreign powers subsequent to the law in question. Although the laws referred to, "or such provisions of the same as may be applicable," have been, by act of Congress approved February 27, 1851, extended over the Territories mentioned, it is a point at issue between certain parties and the Department whether trade by citizens who are inhabitants of these Territories, with Indians who may come to their places of business outside of an Indian reservation, is prohibited by law. A case is now being tested upon a suit brought against the superintendent of Indian affairs for Arizona, and the agent for the Pima and Maricopa Indians in that Territory, by a firm whose goods were seized by the agent for trading with the Indians without a license issued in accordance with law.

It is gratifying to report that in some portions of the country, more particularly in Montana Territory, by the vigorous and determined action of the superintendent of Indian affairs there the traffic in spirituous liquors with the Indians has been to a considerable extent suppressed. During the year a number of persons have been arrested, tried, and convicted, for the first time in the history of that Territory, for selling liquor to Indians. In Washington Territory, also, efforts made in the same direction have been quite successful. Much credit is due to the officers who have shown such activity and zeal in this matter, and it is hoped that others may be inspired, by their example and success, to seek

to accomplish like results, so that this bane to the Indian race may be greatly abated if not altogether removed.

Under the legislation of Congress appropriating money for the removal of the Kickapoo Indians, who, many years ago, left the Indian country and went to Mexico, back to the United States, steps were taken early last spring to effect that object. An agent, with a delegation of Kickapoos from Kansas, proceeded to Santa Rosa, in Mexico, and there met these Indians and communicated to them the wishes and purposes of the United States Government. The mission was, however, unsuccessful, as the Indians were influenced against the measure proposed by misrepresentations on the part of some Mexican officers and citizens as to what would be their condition in the United States, and by deceiving them with assurances that the Mexican government would take care of them and liberally supply their wants. As it is important to the welfare and peace of the citizens of Texas residing near the frontier, who have suffered severely by the depredations and outrages of these Kickapoos in the past, further efforts to effect what is so desirable, it is thought, should be made early next year. For the report of the agent of his proceedings I refer to document herewith, marked B.

During the past three months Indian lands have been disposed of by sale, or are being disposed of, by or under the direction of the Department, to the extent of 40,438.89 acres in the aggregate. These lands embrace a residue of 2,687.44 acres, held in trust by the United States for the Chippewas and Munsees, situated in Kansas; also, 6,360.24 acres in Nebraska, held in trust for the Sac and Fox of the Missouri Indians. These lands are sold and the money applied for the benefit of the Indians, in compliance with treaty stipulations. A small residue of the Cherokee neutral lands in Kansas, 3,231.21 acres, which were awarded to settlers in accordance with treaty provision, but forfeited by non-payment, have been sold on sealed bids. Congress, by special act, provided for the appraisement and sale of the Stockbridge and Munsee lands in Wisconsin, comprising 28,160 acres. The appraisement has been made under the supervision of this office, and the sale is being made by the General Land Office, in accordance with the act.

In compliance with the act of Congress of July 5, 1862, a commission was appointed to effect settlement with persons appointed by Indian councils to receive money due to incompetent and orphan Indians. This commission made an investigation of the action of persons appointed by Wyandotte and Shawnee councils, the only tribes coming properly within the proviso of the law; and their reports, which give the action taken in detail, are published herewith, marked C.

A commission was also appointed to ascertain the facts connected with the applications of mixed-bloods for land or scrip under the treaties with the various bands of Chippewas in Wisconsin and Minnesota.

The province of this commission was extended to the investigation of passed issues of scrip. Reference is made of the extended report of the majority, detailing many irregularities; also to the minority report, which dissents from the statements of the majority; both of which are published herewith, marked D.

It having been represented to the Department that a confused and unsettled state of affairs, appertaining to this branch of the service, existed in Colorado Territory, particularly at the Los Pinos, or lower agency, and it being deemed necessary, in order to ascertain the truth in the case, that an examination thereinto should be made on the spot, under your direction a special agent, G. F. Jocknick, esq., was instructed, in July last, to proceed to that point for the purpose indicated. The re-

port of this agent is herewith, marked E, and shows that the management of Indian affairs in the Territory has not been as favorable to the prosperity and advancement of the Indians as could be desired, but which finds some explanation in the fact of frequent changes of agents in the past two or three years, the inexperience of the agents at present in charge, and the many obstacles to be overcome in establishing upon reservations, and in making the necessary provision for their support, Indians accustomed to a wild and wandering life. When the new agents referred to shall have become better informed in regard to their duties, and more clearly comprehend the situation and the purposes of the Government, it is hoped a more favorable condition of things will exist, and complaints will cease on the part of the Indians. One source of much uneasiness to the Indians is the encroachment, as they charge, of miners and other persons upon their reservation. To what extent they have reason to be troubled in this regard it is impossible to determine, as the boundaries of their reservation have never been surveyed. Doubtless there are intruders upon their land, and, perhaps, in some cases, unwittingly so. The sooner the work of surveying the reservation provided for in the treaty of 1868 is completed, the better it will be for the interests of both Indians and whites. A special report will be made to you by this office, with such suggestions and recommendations as shall be considered necessary to fulfill the treaty stipulations with the Indians in Colorado, and to effect a satisfactory management of their agencies.

It was also deemed important that an investigation should be had into the condition of affairs at the several agencies for the Sioux, on the Upper Missouri River, and accordingly a special agent, N. J. Turney, esq., in June last, was instructed to perform that duty. His report, to which reference is respectfully made, for an account of his proceedings, views and recommendations, is herewith, marked F.

The commissioners appointed by the President, in accordance with the joint resolution of Congress approved July 1, 1870, to negotiate with the Indians upon the Umatilla reservation in Oregon, with a view of ascertaining on what terms they would relinquish to the United States all their claim or right to that reservation, and remove to some other in Oregon or Washington Territory, or take lands in severalty in quantities not exceeding one hundred and sixty acres each, on their present reservation, met at the Umatilla agency on the 7th of August last, and held a council with the Indians for the period of a week, Hon. Felix R. Brunot, chairman of the board of Indian commissioners, being present, whose report of the proceedings will be found following that of the board, marked as document A. This matter is also referred to in the report of Superintendent Meacham, herewith, numbered 12; and the United States agent in charge of the Umatilla reservation reports the fact; and remarks that the object of the resolution was fully explained to the Indians by the commissioners, who took great care to have them fully understand the proposition presented, and to see that no outside influence was allowed to interfere with their judgment; and that after the matter had been fully discussed, the Indians declared they would not part with their present reservation, and that none of them expressed a desire to take their land in severalty.

Special attention is respectfully called to the third annual report of the board of Indian commissioners, herewith, marked A.

The accompanying reports of the superintendents and Indian agents, numbered in regular order, are respectfully referred to for information, in detail, respecting the condition of the Indians in the several superintendencies and agencies. The disposition for improvement is evidently



more manifest and general than has been the case heretofore, and it should be encouraged by a liberal policy on the part of the Government. By a judicious management of their affairs, with a sufficient supply of means requisite for the purpose, it may be confidently expected that their future advancement in civilization will be measurably rapid and gratifying. The reports will present, it is believed, such an array of facts as will confirm this general view.

Very respectfully, your obedient servant,

H. R. CLUM,  
*Acting Commissioner.*

Hon. C. DELANO,  
*Secretary of the Interior.*

#### PAPERS ACCOMPANYING THE REPORT OF THE ACTING COMMISSIONER OF INDIAN AFFAIRS FOR 1871.

- A.—Report of board of Indian commissioners, with accompanying documents.
- B.—Report of John D. Miles, United States Indian agent, relative to his mission to the Kickapoo Indians in Mexico, with the view to get them to remove back to the United States; also letter from Colonel J. J. Reynolds, United States Army, relative to said Indians, and their depredations upon citizens of Texas.
- C.—Report of commissioners to effect settlements with persons appointed by Wyandott and Shawnee councils to receive money due incompetent and orphan Indians of these tribes.
- D.—Report of commissioners relative to application of mixed-blood Chippewas, in Wisconsin and Minnesota, for land or scrip, under treaties with various bands of Chippewas.
- E.—Report of Special Agent Jocknick relative to condition of Indian affairs in Colorado Territory.
- F.—Report of Special Agent Turney relative to condition of affairs at the agencies for the Sioux upon the Missouri River.

#### WASHINGTON SUPERINTENDENCY.

- No. 1.—Annual report of T. J. McKenny, superintendent of Indian affairs.
- No. 2.—Annual report of E. M. Gibson, agent Neeah Bay agency.
- No. 3.—Annual report of E. Eells, agent Skokomish agency.
- No. 4.—Annual report of J. H. Wilbur, agent Yakama agency.
- No. 5.—Annual report of E. C. Cherouse, sub-agent Tulalip agency.
- No. 6.—Annual report of G. A. Henry, sub-agent Quinalt agency.
- No. 7.—School report of G. W. Byrd, Quinalt agency.
- No. 8.—Annual report of B. Barlow, farmer in charge of Puyallup reservation.
- No. 9.—School report of L. F. Thompson, Puyallup reservation.
- No. 10.—Annual report of W. P. Winans, farmer in charge of Fort Colville Indians.
- No. 11.—Annual report of J. Smith, farmer in charge of Chehalis reservation.

#### OREGON SUPERINTENDENCY.

- No. 12.—Annual report of A. B. Meacham, superintendent of Indian affairs.
- No. 13.—Annual report of J. Smith, agent Warm Springs agency.
- No. 14.—School report of J. Thomas, Warm Springs agency.
- No. 15.—Annual report of N. A. Cornoyer, agent Umatilla agency.
- No. 16.—School report of G. A. Vermeesch, Umatilla agency.
- No. 17.—Annual report of B. Simpson, late agent Siletz agency.
- No. 18.—Annual report of J. Palmer, agent Siletz agency.

#### CALIFORNIA SUPERINTENDENCY.

- No. 19.—Annual report of B. C. Whiting, superintendent of Indian affairs.
- No. 20.—Annual report of D. H. Lowry, agent Hoopa Valley agency.
- No. 21.—Annual report of S. G. Whipple, late agent Hoopa Valley agency.
- No. 22.—School report of A. M. Webb, Hoopa Valley agency.
- No. 23.—Annual report of H. Gibson, agent Round Valley agency.
- No. 24.—School report of M. A. Gibson, Round Valley agency.

- No. 25.—Annual report of C. Maltby, agent Tule River agency.
- No. 26.—School report of F. J. Saxe, Tule River agency.
- No. 27.—Annual report of A. P. Greene, special agent Mission Indian agency.
- No. 28.—Annual report of J. R. Tansey, special agent Mission Indian agency.

## ARIZONA SUPERINTENDENCY.

- No. 29.—Annual report of H. Bendell, superintendent of Indian affairs.
- No. 30.—Annual report of J. H. Stout, special agent Pima and Maricopa agency.
- No. 31.—Annual report of F. E. Grossman, late special agent Pima and Maricopa agency.
- No. 32.—Annual report of J. A. Towner, special agent Colorado River agency.
- No. 33.—Annual report of R. A. Wilbur, special agent Papago agency.

## NEW MEXICO SUPERINTENDENCY.

- No. 34.—Annual report of N. Pope, superintendent of Indian affairs.
- No. 35.—Annual report of J. H. Miller, agent Navajo agency.
- No. 36.—School report of C. A. G. Menaul, Navajo agency.
- No. 37.—Annual report of W. F. M. Army, agent Pueblo agency.
- No. 38.—Annual report of C. F. Roedel, agent Cimarron agency.
- No. 39.—Annual report of O. F. Piper, agent Southern Apache agency.
- No. 40.—Annual report of A. J. Curtis, agent Mescalero Apache agency.
- No. 41.—Annual report of J. B. Hanson, agent Abiquiu agency.

## MONTANA SUPERINTENDENCY.

- No. 42.—Annual report of J. A. Viall, superintendent of Indian affairs.
- No. 43.—Annual report of F. D. Pease, agent Crow agency.
- No. 44.—School report of J. H. Aylsworth, Crow agency.
- No. 45.—Annual report of C. S. Jones, agent Flathead agency.
- No. 46.—Annual report of J. Armitage, agent Blackfeet agency.
- No. 47.—Annual report of A. J. Simmons, special agent Milk River agency.
- No. 48.—Report of A. J. Smith, appointed to visit Bannacks, Shoshones, and Sheep-Eaters.
- No. 49.—Letter from War Department and accompanying papers relative to certain Sioux Indians in Montana Territory.

## NORTHERN SUPERINTENDENCY.

- No. 50.—Annual report of S. M. Janney, superintendent of Indian affairs.
- No. 51.—Annual report of Asa M. Janney, agent Santee agency.
- No. 52.—Annual report of J. Webster, agent Santee agency.
- No. 53.—School report of A. A. Riggs, Santee agency.
- No. 54.—Annual report of E. Palmer, agent Omaha agency.
- No. 55.—School report of E. H. Gillingham, Omaha agency.
- No. 56.—School report of J. Warner, Omaha agency.
- No. 57.—Annual report of H. White, agent Winnebago agency.
- No. 58.—School report of J. S. White, Winnebago agency.
- No. 59.—Annual report of J. M. Troth, agent Pawnee agency.
- No. 60.—School report of E. G. Platt, Pawnee agency.
- No. 61.—Annual report of A. L. Green, agent Otoe agency.
- No. 62.—Annual report of T. Lightfoot, agent Great Nemaha agency.
- No. 63.—School report of M. B. Lightfoot, Great Nemaha agency.

## CENTRAL SUPERINTENDENCY.

- No. 64.—Annual report of E. Hoag, superintendent of Indian affairs.
- No. 65.—Annual report of B. Darlington, agent Cheyenne and Arapaho agency.
- No. 66.—School report of A. J. Standing and J. A. Cattell, Cheyenne and Arapaho agency.
- No. 67.—School report of J. Butler, Kiowa agency.
- No. 68.—Annual report of J. Richards, special agent Wichita agency.
- No. 69.—Annual report of J. D. Miles, agent Kickapoo agency.
- No. 70.—School report of L. Miles, Kickapoo agency.
- No. 71.—School report of E. King, Kickapoo agency.
- No. 72.—Annual report of J. T. Gibson, agent Neosho agency.
- No. 73.—Annual report of J. T. Gibson, agent relative to Osages.
- No. 74.—Annual report of J. Hadley, agent Sac and Fox agency.
- No. 75.—Annual report of M. Stubbs, agent Kaw agency.
- No. 76.—Annual report of J. H. Morris, agent Pottawatomie agency.

- No. 77.—Annual report of R. L. Roberts, agent Shawnee agency.
- No. 78.—Annual report of George Mitchell, special agent Quapaw agency.
- No. 79.—School report of J. C. Isaac, Quapaw agency.
- No. 80.—School report of A. C. and E. H. Tuttle, Quapaw agency.
- No. 80½.—Annual report of L. Tatum, agent Kiowa agency.

## INDEPENDENT AGENCIES AND SPECIAL AGENCIES.

- No. 81.—Annual report of D. Sherman, New York agency, New York.
- No. 82.—School report of B. F. Hall, orphan asylum, New York agency, New York.
- No. 83.—Annual report of R. M. Smith, agent Mackinac agency, Michigan.
- No. 84.—Annual report of W. T. Richardson, agent Green Bay agency, Wisconsin.
- No. 85.—Annual report of L. Clark, special agent for Sacs and Foxes in Iowa.
- No. 86.—Annual report of S. D. Webster, agent Yankton agency, Dakota.
- No. 87.—Annual report of H. E. Gregory, agent Ponca agency, Dakota.
- No. 88.—School report of J. Lawrence, Ponca agency, Dakota.
- No. 89.—Annual report of H. F. Livingston, agent Upper Missouri agency, Dakota.
- No. 90.—Annual report of John E. Tappan, agent Fort Berthold agency, Dakota.
- No. 91.—School report of H. L. Clifford, Fort Berthold agency, Dakota.
- No. 92.—Annual report of J. C. O'Connor, special agent Grand River agency, Dakota.
- No. 93.—Annual report of J. M. Washburn, agent Whetstone agency, Dakota.
- No. 94.—Annual report of T. M. Koues, special agent Cheyenne River agency, Dakota.
- No. 95.—Annual report of J. W. Daniels, agent Sisseton Sioux agency, Dakota.
- No. 96.—School report of W. R. Morris, Sisseton Sioux agency, Dakota.
- No. 97.—Annual report of W. H. Forbes, agent Devil's Lake agency, Dakota.
- No. 98.—Annual report of J. B. Monteith, agent Nez Perce agency, Idaho.
- No. 99.—Annual report of M. P. Berry, special agent Fort Hall agency, Idaho.
- No. 100.—Annual report of J. J. Critchlow, agent Uintah Valley agency, Utah.
- No. 101.—Annual report of J. Irwin, special agent Shoshone and Bannack agency, Wyoming.
- No. 102.—Annual report of J. S. Littlefield, agent White River agency, Colorado.
- No. 103.—Annual report of J. N. Trask, agent Los Pinos agency, Colorado.
- No. 104.—Annual report of J. B. Thompson, temporary special agent, Denver, Colorado.
- No. 105.—Annual report of C. A. Bateman, agent Walker River agency, Nevada.
- No. 106.—Annual report of C. F. Powell, special agent, Southeast Pah-Ute agency, Nevada.
- No. 107.—Annual report of J. B. Jones, agent Cherokee agency, Indian Territory.
- No. 108.—Annual report of T. D. Griffith, agent Choctaw and Chickasaw agency, Indian Territory.
- No. 109.—School report of F. Le Flore, superintendent Choctaw schools, Indian Territory.
- No. 110.—School report of C. D. James, superintendent Chickasaw schools, Indian Territory.
- No. 111.—Annual report of F. S. Lyon, agent Creek agency, Indian Territory.
- No. 112.—School report of L. Worcester, superintendent manual-labor school, Creek agency, Indian Territory.
- No. 113.—School report of J. M. Perryman, superintendent public school, Creek agency, Indian Territory.
- No. 114.—Annual report of H. Breiner, agent Seminole agency, Indian Territory.
- No. 115.—Annual report of E. P. Smith, agent Chippewa agency, Minnesota.
- No. 116.—School report of J. C. Strong, Chippewa agency, Minnesota.
- No. 117.—Annual report of S. N. Clark, agent for Chippewas of Lake Superior.

## STATISTICS, ETC.

- No. 118.—Population, schools, &c., of different tribes.
- No. 119.—Agricultural products, &c., of different tribes.
- No. 120.—Liabilities of the United States under treaty stipulations with Indians.
- No. 121.—Indian trust funds.
- No. 122.—Indian trust land sales.
- No. 123.—Statement showing number of Indian reservations, area thereof, &c.

## APPENDIX.

## PAPERS RECEIVED SUBSEQUENT TO THE DATE OF THE REPORT OF THE ACTING COMMISSIONER OF INDIAN AFFAIRS.

- No. 124.—Report of board of visitors at annuity payments to the Red Lake and Pembina Chippewas.
- No. 125.—Report of board of visitors at annuity payments to Chippewas of the Mississippi.

No. 126.—Special report of B. C. Whiting, superintendent of Indian affairs, California, relative to the condition of the Mission Indians in that State.

No. 127.—Annual report of J. W. Wham, special agent Red Cloud agency.

No. 128.—Annual report of W. D. Crothers, special agent Moquis Pueblo agency.

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THIRD ANNUAL REPORT OF THE BOARD OF INDIAN COMMISSIONERS.

WASHINGTON, D. C., *December 12, 1871.*

SIR: I have the honor to submit herewith the third annual report of the Board of Indian Commissioners to the President of the United States.

Very respectfully, your obedient servant,

VINCENT COLYER,  
*Secretary.*

Hon. COLUMBUS DELANO,  
*Secretary of the Interior, Washington, D. C.*

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SIR: The Board of Indian Commissioners, in making their third annual report, find abundant cause for thankfulness and encouragement while reviewing the condition of the Indians in the United States during the past year.

CONFIDENCE AND GOOD WILL BETWEEN WHITES AND INDIANS.

The remarkable spectacle seen this fall, on the plains of Western Nebraska and Kansas and Eastern Colorado, of the warlike tribes of the Sioux of Dakota, Montana, and Wyoming, hunting peacefully for buffalo without occasioning any serious alarm among the thousands of white settlers whose cabins skirt the borders on both sides of these plains, shows clearly that the efforts of the friends of peace in establishing confidence between the white people and the Indians, in this heretofore greatly disturbed section of the country, have been eminently successful. We contrast this picture with that presented by the same tribe, when, five years ago, in consequence of our Government's bad faith in violating its treaties with them, they were engaged in a war made memorable by the so-called Fort Kearney massacre, in which ninety-eight of our soldiers were killed in sight of the fort, and in the course of which many of the settlers on the frontier lost their lives, and so many hundreds of others were compelled to abandon their cabins and flee to the larger towns for safety.

PEACEFUL RELATIONS WITH RED CLOUD AND THE SIOUX.

With the exception of some slight manifestations of ill-will against the progress of the Northern Pacific Railroad, caused by a misunderstanding, this numerous and powerful tribe has been perfectly friendly during the past year. The chairman of the board held a council at Fort Laramie with Red Cloud and his principal chiefs in June, and found them unchanged in their professions of a determination to maintain peaceable relations with the whites. He could hear of no complaints against them since they abandoned the war-path in the spring of 1870. His report will be found herewith, marked A a.

When Red Cloud visited Washington, in July of last year, it was

maintained by a portion of the Western press, and the people of the frontier, that his return would be marked by the renewal of outrages upon the settlers. Happily, the prediction was not realized, and peace still continues. The Sioux are extremely sensitive in regard to the slightest encroachment upon their reservation, or the hunting grounds allotted to them in the treaty of 1868, and have objected even to the establishment of an agency for their own benefit within its limits. They are impressed with the conviction that where one white man is allowed to enter their territory many will inevitably follow. In view of their past experience, we cannot think them unreasonable in this. The same wise consideration which led the Government to withdraw the garrisons of Forts Reno, C. F. Smith, and Phil. Kearney, in 1868, and to prevent the proposed Big Horn expedition in 1870, should induce a proper effort to gain their consent by negotiation, before permitting any breach of the treaty stipulations by the invasion of their hunting grounds by surveying or exploring parties. It is believed that the privilege which may be deemed necessary for the Northern Pacific Railroad Company may be had by negotiation at a moderate cost, whereas the attempt to seize it without will probably occasion a renewal of the war.

#### VISIT OF THE CHEYENNE, ARAPAHOE, AND WITCHITA CHIEFS TO THE EAST.

The wisdom of keeping faith, in honestly fulfilling our part of the treaties, and in making the chiefs acquainted with the character and resources of our people, by inviting them to visit the East, is thus practically demonstrated by our present relations with these Sioux. Some of the chiefs of the Cheyennes and Arapahoes of the southern plains, in acceptance of a similar invitation, visited Washington and the other principal cities of the East, during the past summer. The kind treatment they received from the President and executive officers of the Government at Washington, and from the citizens of Philadelphia, New York, and Boston, (see Appendix A, No. 1,) made so favorable an impression on their minds that, on their return to the Indian country, when their neighbors, the Kiowas, angry at the arrest of their chiefs, Satanta and Satauk, earnestly pressed them to go on the war-path, they promptly refused. If the Cheyennes and Arapahoes had joined their forces with the Kiowas, we should have had a bloody war. But the Kiowas, finding themselves unsupported, had the wisdom to abandon the project and remain at peace.

#### ARREST AND PUNISHMENT OF KIOWA CHIEFS.

The Kiowa chiefs had been invited to accompany the delegation of Cheyenne, Arapahoe, and Wichita chiefs on their visit to the East, but had been dissuaded from so doing by some evil-minded half-breeds who were in the habit of inciting them to raids on the Texas frontier, and who feared their vicious trade in the product of the robberies would be broken up. The consequence was, that while the other chiefs visited our principal cities, they went on one of those plundering tours into Texas, and, boasting of it on their return home, were arrested by General Sherman, and justly punished.

#### PRESENT CONDITION OF CHEYENNES AND ARAPAHOES.

The Cheyennes and Arapahoes are generally contented upon their new reservation. The schools, under care of the Friends, are gr-

ing their confidence, and their condition has sufficiently improved during the last year to warrant the expectation of a satisfactory advancement in the future.

#### THE OSAGES.

The condition of the Osages is most unsatisfactory. On the representations of the committee of the board, that the Government would protect them in the proposed new reservation in the Indian Territory, they consented last year to remove. Nevertheless, there are many trespassers on the land to which they were removed. In addition to this trouble, a new survey, which assumes to change the ninety-sixth parallel as heretofore located, if correct, deprives them of the greater part of the tillable land upon which they have settled, and already made valuable improvements. The continuation of the trespasses on Indian lands, in spite of the oft-repeated warning of the Government, seems to be the result of past failures to enforce the laws for the protection of the reservations. The squatters still believe that there is no real intention to interfere, and nothing but forcible ejection will undeceive them. The justice of your determination to enforce the laws and maintain the honor of the Government, by keeping its pledges to the Indians, cannot fail to be sustained by the people of the country.

In the case of the Osages, the lands were bought with their own money, and the obligation to protect them has, if possible, additional force. If it be found that the new location of the ninety-sixth parallel is correct, it seems to us that the Government is bound in honor to compensate the Cherokees for the land and leave the Osages in possession.

#### THE APACHES OF NEW MEXICO AND ARIZONA.

The only other Indians who have caused any serious trouble are the Apaches of New Mexico and Arizona.

In our last two annual reports we called attention to the situation of this tribe, their eager desire for peace, their starving condition, and the opinion of the Indian agents and Army officers, that, with means to feed and clothe them, they could be kept at peace. Unable to obtain an appropriation from Congress for the purpose, the Indian Department was powerless, and the Apaches were left to obtain food and raiment as they best could—usually by stealing from the settlers or travelers on the highway. As many of their valleys, where they previously cultivated corn, were occupied by settlers, and their mountains overrun by gold-prospectors, who hunted their game, and no attempt had ever been made by the Government, either by treaty or conference, to consider their rights or necessities, this conduct of the Apaches ought not to surprise us. At the urgent solicitation of the board, with the approval of the Secretary of the Interior, Congress, at its last session, made an appropriation of seventy thousand dollars for the special purpose of correcting this evil, and this money becoming available on the 1st of last July, the Board, at its meeting in May, directed its Secretary to proceed to New Mexico and Arizona, to make arrangements to bring these roving Apache Indians upon suitable reservations, and to feed, clothe, and otherwise care for them. The hearty approval of the President, the instructions of the Secretary of the Interior, and necessary orders from the Secretary of War having been obtained, the Secretary of the board visited Arizona and New Mexico. His offers of peace were received by the Apaches with great eagerness, several thousands of them immediately

coming in upon the reservations selected for them, and latest advices show that the remainder will soon follow, if not deterred from doing so by improper influences. The action of the Secretary has met with your approval, and that of the Secretary of the Interior, and the orders issued from the Interior and War Departments, for the purpose of carrying fully into effect the proposed plan, are entirely in accord with the past and present views of the Board of Indian commissioners. Similar instructions were issued by the Interior and War Departments in 1869, soon after the organization of the board, which defined the policy of the Government in the treatment of the Indians. This policy was set forth in the report of the Commissioner of Indian Affairs in 1869, viz: "that they (the Indians) should be secured in their legal rights; located when practicable on reservations; assisted in agricultural pursuits and the arts of civilized life; and that Indians who should fail or refuse to come in and locate in permanent abodes provided for them would be subject wholly to the control and supervision of military authorities, to be treated as friendly or hostile as circumstances might justify."

The clearly defined allotment of their respective duties to the Indian agents and the military officers in the Indian country, can hardly fail to secure harmony of action, and it is hoped that capable Christian agents may soon be appointed to represent the Department of the Interior upon the reservation.

It is believed that the policy, if faithfully sustained and persisted in by the military and civil officers commanding in Arizona and New Mexico, will be successful, as it has been elsewhere.

The attempt to defeat it by the arrest of Indians upon the reservation who have made peace, for acts alleged to have been committed in time of war, should be resisted, otherwise the act of the Government upon whose faith their surrender is made becomes one of mere treachery. From the time of the Gadsden purchase, when we came into possession of their country, until about ten years ago, the Apaches were the friends of the Americans. Much of the time since then, the attempt to exterminate them has been carried on, at a cost of from three to four millions of dollars per annum, with no appreciable progress made in accomplishing their extermination.

But the activity of the military has accomplished its only legitimate and proper end, that of compelling in the Indians an earnest desire for peace. To persist in war under such circumstances would be not only barbarous in the extreme, but an inexcusable waste of the funds and resources of the Government. It has been asserted that the Apaches are more savage and less to be trusted than other Indians.

The agent of the Government who had charge of the Apaches in 1859, when they were at peace, said in his report of the White Mountain Coyoteros, numbering 2,500, and including Cochise's band, that "in all their intercourse with the Government, their deportment toward travelers and traders, they have shown themselves to be the most reliable of all the bands of the Apaches." And of all the Apaches in regard to whom the assertion alluded to is now made, he said, "They cultivate the soil extensively, raise wheat, corn, beans, and pumpkins in abundance." Detailed account will be found in Commissioner Colyer's report on Arizona, A b.

#### PARTIALLY CIVILIZED TRIBES.

The condition of the partially civilized tribes on established reservations has materially improved. The covetous desire of white people, generally living near these reservations, to obtain possession of the lands,

either for occupation or speculation, led to the introduction at the last session of Congress of several bills providing for the removal of the Indians, and the sales of the lands, without due regard to the rights of the Indians or the sacred obligations of treaties. When the attention of Congress was called to these several acts, however, and their manifest injustice pointed out, they were promptly abandoned.

#### THE UMATILLA INDIAN RESERVATION.

One of these measures, fairer than some others, proposed to submit the question of removal and sale of the lands belonging to the Indians on the Umatilla reservation, in Northeastern Oregon, upon payment of certain annuities, and providing a new home for them, and commissioners were appointed by the Secretary of the Interior to ascertain the wishes of the Indians. By request of the Secretary of the Interior and the direction of the board, the chairman visited the reservation in August, to be present at the council, and, after a week's mature consideration of the proposal, during which the subject had been fully presented to them, the Indians rejected the proposal. (See report, A c.)

#### INDIANS IN WASHINGTON TERRITORY AND OREGON.

The chairman of the board also visited the Warm Springs and Grand Ronde reservations in Oregon, and the Yakama, Tulalip, Swinomish, Lummi, and S'Kokomish reservations in Washington Territory.

The condition of the Indians in Oregon and Washington is vastly better than individual statements and common rumor have led us to anticipate. Many of them are industrious, and labor on their reservations, and others, as at Grand Ronde and along Puget Sound, labor for the farmers or at the saw-mills, and receive the commendation of their employers and the agents. They have adopted the costume and are rapidly acquiring the habits of the whites. Some of them are Christians, and exemplary for their consistent lives. There are also many who have learned more of the vices than the virtues of civilization. This class, attracted as they are to the vicinity of towns and railroads, is most frequently seen by the citizen and the traveler, and give a mistaken color to his opinions of the race. When it is remembered that the Indians of Oregon and Washington were only placed upon reservations from ten to fifteen years ago, but few of them more than twelve, it must be admitted that their progress toward civilization has been wonderfully rapid. (See report on reservations in Washington Territory and Oregon A d.)

#### NEED OF CIVIL LAW OVER INDIANS.

A serious detriment to the progress of the partially civilized Indians is found in the fact that they are not brought under the domination of the law, so far as regards crimes committed against each other. The difference in the characteristics of the various tribes, together with the differences in the degree of civilization to which they have attained, seems to render it impossible to frame any general law equally applicable to all. To attempt the enforcement of civil or statute law in a tribe of Indians when first brought into peaceful relations with the Government is not deemed expedient; nor would it be practicable, for the reason that the savages are unable yet to distinguish between such enforcement, and acts of war. But when they have adopted civilized



costume, and civilized modes of subsistence, we owe it to them, and to ourselves, to teach them the majesty of civilized law, and to extend to them its protection against the lawless among themselves. Some amendment of the laws which prohibit the selling of spirituous liquors to the Indians is needed, to remedy the present difficulties which prevent the conviction of persons guilty of the crime. These subjects are more fully treated on in the report of the chairman of the board on Oregon and Washington Territory, to which you are respectfully referred. (Appendix A d.)

Many of the partially civilized Indians are ready for the allotment of their lands in severalty, and this should be done as rapidly as possible under some regulation which would prevent the alienation of such lands for a term of years. In many cases the outlines of the reservations are not defined by actual survey, and the uncertainty as to their exact limits has given color for the encroachment of whites. The lines should be distinctly established, and summary measures should be taken for the ejectment of intruders.

#### OBJECTIONS TO FREQUENT REMOVAL OF INDIANS.

The frequent removal of Indians has led to a general distrust of the designs of the Government with regard to them, and the fear of such removal has deprived them of all incentive to improve their lands, or to labor more than is necessary for a merely comfortable subsistence. The members of the board, as opportunity has offered, have endeavored to quiet their distrust and induce them to labor on the lands with the belief that they should be protected in their rights.

The recommendation of the peace commission of 1868, "that the so-called Indian Territory should be strictly preserved for the future settlement of the nomadic tribes east of the Rocky Mountains, and such other Indians as may be induced to migrate to the proposed Indian commonwealth," commends itself to our judgment, and it is earnestly hoped that the territory will be preserved intact for that purpose. The records of military expeditions, and the personal examinations of the board west of the 96th parallel, show that a large proportion of the territory is unfit for cultivation, and it is believed that the remainder will not prove to be too much for the purpose indicated.

The removal of partially civilized tribes already making fair progress and attached to their homes on existing reservations, is earnestly deprecated. Where such reservations are thought to be unreasonably large, their owners, as in the case of the Ottoes and Missourias, and the Omahas, will themselves soon see the propriety of selling off the surplus for educational purposes. The Government meanwhile owes them the protection of their rights to which it is solemnly pledged by treaty, and which it cannot fail to give without dishonor.

#### INVESTIGATION OF ALLEGED CLAIMS IN CALIFORNIA.

Commissioners Brunot and Farwell were requested by the Secretary of the Interior, during their visit to the Pacific States, to investigate certain claims of old date which had been presented to the Indian Department for payment, amounting to \$373,133 02.

On arriving at San Francisco, notice was given for over two weeks in the principal daily papers for the claimants to present and substantiate their claims before the committee. Only two claimants for small amounts were present in response to the notice. Subsequently, diligent inquiry was made by Commissioner Farwell in the localities where the

principal claims were alleged to have originated. With the exception of some small claims, his convictions are very strong that nearly all of them are either fraudulent or have been already paid. (See report of Commissioner John V. Farwell, investigation of alleged claims in California, Appendix A e.)

Commissioner Farwell visited Hoopa Valley and Round Valley reservations. He found the Indians in Hoopa Valley using McCormick's reapers in harvesting on the agency farm, and giving abundant evidence of capacity for advancement, and, at the same time, showing in almost every other respect the most striking proofs of abuse and mismanagement on the part of those to whom their care has been heretofore intrusted. The too near vicinity of soldiers is deemed injurious both to themselves and the Indians, and, as in the case of the Washington and Oregon reservations, it is imperatively necessary that the lines of the reservations should be defined, and trespassers ejected. (See Appendix A e.)

#### MISSION INDIANS IN SOUTHERN CALIFORNIA.

The condition of the Mission Indians in Southern California demands the serious attention of the Government. In the year 1802, according to the records of the missions, they harvested 33,576 bushels of wheat, and owned 67,782 horned cattle, 107,172 sheep, 3,064 horses and mules, and 1,040 hogs. The choice spots from San Francisco on the north to San Diego on the south were owned and occupied by them. Thirty-eight years ago, by a Mexican law, their lands and stock, before held in common, were divided among them. Since they have come under the control of the United States those lands have been taken from them, and they are now poor. They are scattered through the counties of Los Angeles, San Bernardino, San Diego, and Santa Barbara, and number perhaps 3,000 souls. They have a good knowledge of the manual-labor occupations of the country, and perform the most of it themselves, as herders, farm-hands, grape-gatherers, &c., and are in fact in a state of vassalage to the whites, and their women furnish most of the domestic labor of the country. The meaner class of whites either cheat the Indians out of the pay for their labor, or pay them in that which increases their demoralization.

Many of them speak both Spanish and English. Many are industrious and well-behaved, while many others are drunkards and debased in the extreme. Their character is the natural result of the temptations and abuse to which they have been subjected, together with their deprivation of all incentives to manly exertion.

To the rich rancheros they are slaves in all but the name. A few of these are gentlemen, who seem to have a kindly feeling toward them, and a desire that "something should be done for them." The valley of San Pasquale was, by the order of the President, withdrawn from settlement with a view to create a reservation, upon which it was proposed to collect and care for them, but the remonstrances of the whites led to the revocation of the order, and the project is abandoned. It is believed that the opposition to the reservation plan really originated from an unwillingness to lose the labor of the Indians in the settled districts, and not, as was supposed, from the settlers in or about San Pasquale. The difficulties of last summer, it is believed, had their origin, not with the Indians, but with the whites instigating them, and the contest was as to which of the districts should have the Chief resident with them, to attract and the better to control the labor which they are unwilling to dispense with. Taking the situation as it is, we

believe the only just, and best solution of the difficult question of the Mission Indians, is for Congress to pass a law, giving to Indian families the same amount of land allowed to whites under the homestead law, securing to those who now occupy them the little homes and patches on which they or their forefathers have lived for so many years, and allowing those who have none to select them upon any unoccupied land. They should receive a title inalienable for twenty years, not subject to execution, &c., and *each Indian farm should be subject to the law which protects reservations from white intrusion*, and its occupants to the intercourse laws. They should be subject in all other respects to the existing laws, and each Indian settler upon land, and of proper age, should be entitled to all the rights of citizenship. An able and humane agent should be appointed to protect, advise, and instruct them, and see to the proper registration of their lands.

If these Indians, as has been reported, owned their lands under the Mexican rule, and the United States failed to have their rights represented before the claims commission, the measure proposed is but an insignificant reparation of a great wrong. It should not be delayed, and least of all should it be prevented by the objections of white men of adverse interests, should they be made.

#### CIVILIZED INDIANS IN INDIAN TERRITORY.

The civilized tribes in the Indian Territory have held the second session of their annual congress, and clearly demonstrated their ability to legislate wisely for their own welfare and that of their neighboring tribes. Delegates were present from the Cherokees, Creeks, Chickasaws and Choctaws, Seminoles, Cheyennes, Arapahoes, Wichitas, and affiliated bands; and though it was the first time that several members had ever attended such a meeting; yet their conduct was good, and the proceedings altogether animated and harmonious. The marked ability of some of the speakers, and the general talent displayed at this council will compare favorably with that found in older legislative bodies. A copy in brief of the report of their proceedings is appended, (Appendix A c.)

Commissioner John D. Lang assisted in the removal of a portion of the Cherokees from North Carolina to their new home in the Indian Territory; his report will be found herewith, marked A i.

#### THE ONEIDAS.

The Oneida Indian reservation in Northern Wisconsin remains as reported last year. The difference of opinion among the members of the tribe as to the wisdom of dividing the lands in severalty, and disposing of such as they do not need, not being reconciled, the board recommend that no action be taken until the Indians agree.

#### INDIANS BECOMING CITIZENS.

Lastly, we may refer to the Winnebagoes and Pottawatomies, who, having been for many years under the care of the missionaries and in contact with civilized life, prefer to abandon their tribal relations altogether, and assume the duties of citizens. Of these, during the last year, there were about one hundred and fifty-four Winnebagoes and two hundred and fifty Pottawatomies, making in all fifteen hundred and ninety-four of the latter who have become citizens; and C

at its last session, having made provision for the distribution of the principal of their trust fund among them, the moneys were duly paid; and they are no longer wards of the Government.

#### MISSIONARY SOCIETIES IN CARE OF RESERVATIONS.

The system of appointing Indian agents nominated by missionary societies commends itself to the judgment of the board, as having effected a manifest improvement in the agencies where it is fully operative. In several cases they have been deceived in the character of the persons appointed, and instant dismissal has followed. In one or two instances the society making a nomination has not yet acted on the implied obligation to take a missionary interest in behalf of the Indians thus committed to their care. It is impossible that so radical a change and improvement as is made and intended by the system should be perfected in the short time during which this has been inaugurated, but enough has transpired to warrant the most sanguine expectation of success. The religious societies which have assumed the responsibility offered them by the President, in his desire to administer wisely, justly, and humanely the affairs of the Government in its relations to the Indians, it is not supposed will in any case fail in their duty from lack of proper effort.

#### SCHOOLS.

The schools among the partly civilized Indians should in all cases be boarding-schools, where children of both sexes, while being taught necessary branches of a common education, may, at the same time, be instructed in manual labor appropriate to their respective sexes. The day-schools are a total or comparative failure in nearly every instance known to the members of the board. The reasons are stated in the report of Mr. Brunot, before referred to.

#### AUDITING ACCOUNTS OF INDIAN BUREAU.

In addition to the duties already devolving upon the board, Congress at its last session added that of auditing all the accounts of the Indian Department, (see act of Congress approved March 3, 1871.) This duty, though a very onerous one to the members, and, like all the powers conferred upon the board since its organization, wholly unsolicited, as it was believed to have been framed by Congress in the interests of economy and honest dealing, was cheerfully undertaken by the executive committee. It necessitated the employment of additional clerks, and consequent expense.

#### WORK OF THE EXECUTIVE COMMITTEE.

From March 23, 1871, to December 5, 1871, the executive committee examined 1,136 vouchers, including cash accounts of superintendents and agents, representing a cash disbursement of \$5,240,729 60, being vouchers for Indian goods, annuities, services, &c., amounting to \$3,410,759 34, and cash accounts of superintendents and agents amounting to \$1,829,170 26.

Of these, there were rejected as follows :

10 for exorbitant prices, amounting to.....	\$82,786 29
2 for being purchased without consulting the board, amounting to .....	2,292 82
7 "Erie and Pacific Dispatch," amounting to .....	15,917 09
21 Northwest Transportation Company, amounting to.....	52,170 80
Total rejected.....	<u>153,166 20</u>

## ECONOMY IN PURCHASING ANNUITY GOODS.

The same care which was taken in the purchase and inspection of the Indian annuity goods last year under the same committee, Messrs. George H. Stuart, Robert Campbell, William E. Dodge, and John V. Farwell, was continued this year, and, as will appear from their report, (Appendix A h,) with much advantage to the service. The confidence inspired in the minds of merchants, manufacturers, and dealers in subsistence, that the awards would be fairly made, largely increased the number of bids and lessened the prices.

In May nearly half a million of dollars' worth of annuity goods were purchased "at and below the lowest market prices," and in May and June beef, bacon, flour, and other subsistence stores, to the amount of \$1,783,729 29, were purchased "at prices averaging much below what had been paid before the board began to exercise its superintendence."

The price paid for beef on the hoof this year averaged 2 $\frac{3}{4}$  cents per pound as against 4 $\frac{3}{8}$  cents per pound last year. The amount purchased, 27,441,750 pounds of beef, cost \$714,006 85. The same amount at last year's prices would have cost \$1,204,692 82, a difference of \$489,695 97 in favor of the present year. While part of this difference may be fairly attributed to a decline in value, it is chiefly due to the competition induced by the reasons given above.

## THE PEACE POLICY—ITS ADVANTAGES.

Increased experience in dealing with the Indians only tends to confirm the board more and more in the wisdom of the policy of peace so uniformly advocated by the President, and supported by the liberality of Congress and the humane sympathies of the people; and the board confidently look forward to the day when the bitterness which now assails this policy in some parts of the United States, where it is least understood, will fill a page in history as unnatural and curious as that which records the old hatred against freedom and the friends of the slave.

## CONCLUSION.

For the uniform kindness and patience with which the President, the Secretary of the Interior, and the several committees of Congress having charge of Indian affairs have listened to the suggestions of the board, and the courtesy and good-will extended toward its members by all the officers of the Executive Departments, the General and all the officers of the Army, with whom they have had any intercourse, the board desire to return their most grateful acknowledgments.

Above all, we desire to return thanks to God for having permitted us to see so much good resulting from comparatively so humble efforts.

Respectfully submitted.

FELIX R. BRUNOT, Pittsburgh, Pa.,  
*Chairman.*

ROBERT CAMPBELL, St. Louis.  
NATHAN BISHOP, New York.  
WILLIAM E. DODGE, New York.  
JOHN V. FARWELL, Chicago.  
GEORGE H. STUART, Philadelphia.  
EDWARD S. TOBEY, Boston.  
JOHN D. LANG, Me.  
VINCENT COLYER, New York,

*Secretary.*

The PRESIDENT.  
40 Ab

## REPORT OF THE COMMISSIONER OF EDUCATION.

DEPARTMENT OF THE INTERIOR, BUREAU OF EDUCATION,  
*November 15, 1871.*

SIR: I have the honor to submit my second annual report. The law regulating my duties requires the collecting of "such statistics and facts as shall show the condition and progress of education in the several States and Territories, and the diffusing of such information respecting the organization and management of school systems and methods of teaching as shall aid the people of the United States in the establishment and maintenance of efficient school systems, and otherwise promote the cause of education throughout the country." The report, if made in strict accordance with these requirements, would contain a full, accurate, and complete account of the yearly progress of the American people in all matters directly and remotely pertaining to education—would be, in effect, a record of the nation's growth in intelligence and virtue.

## METHOD OF COLLECTING MATERIAL FOR THE REPORT.

To make even an approximate statement of the progress resulting from so many and various instrumentalities, necessitates a system of inquiry which can only be prosecuted by the action of the General Government.

Our public-school systems and incorporated institutions of learning, under most diverse control, serve alike to illustrate and to perpetuate that larger liberty regulated by law, that self-poised individuality of persons and civil units which are highly prized as a distinguishing characteristic of the American people.

The furnishing of information by these State and city officials and by the officers of incorporated institutions of instruction is wholly voluntary, and, notwithstanding the perfect willingness which has been shown on their part, some time must elapse before they can become so familiar with the forms as to render the supplying of these educational statistics a matter of routine, while the field and scope of inquiries are steadily enlarging.

Thus, the report of last year, the first publication of its kind, could hardly be more than preparatory, and while the present report will be found fuller and more accurate in many of its statistical details, it must still be regarded as only tentative, and but partially illustrative of the purposes of the Bureau.

Last year, in making up the abstract of information in regard to the different States, the official reports of school-officers were used as the only source of information save in a few instances. This year a large amount of valuable information is added from other sources considered authentic. The preparation of this material required, as moderately estimated, the reduction of about 15,000 octavo pages to the first 350 pages of the Appendix of this report. As indicating the want of uniformity of plan on which the various State and local reports are made, a schedule has been prepared and will be found in the accompanying papers, and is in itself a curiosity to the student of educational literature. It has been the purpose in this abstract to seize the most valuable features of all these reports, and gather them for the benefit of the whole country. The information sought from this office in regard to school legislation in the different States, it has been impossible to give fully in this report without occupying too much space. To meet these special

demands a careful synopsis of all the respective school-statutes is in the course of preparation. As far, however, as this information appears in the respective reports from which the abstracts are taken, it is included.

#### USE OF SUCH A REPORT.

The grouping of these facts, collected as well as may be for the entire country, gives the patriotic student and statesman an opportunity to place aright in the scale of progress each section or locality. It makes possible those most valuable suggestions which come from the diverse conditions of various communities under one Government, and trusting to the same aspirations and efforts for future success.

#### UNIVERSAL EDUCATION ESSENTIAL TO THE REPUBLIC.

As a nation, from the first, the American people have appealed to the judgment of mankind. We believe our institutions founded in the interest of human nature, and susceptible of clear and satisfactory vindication to right human reason. We propose to offer to the world the best illustration of human government, promoting with equal care the welfare of every citizen. But, plainly, we can neither know nor be assured that we have the best without a knowledge of the condition of other peoples. Our civilization, following its own mode of Americanizing everything that becomes a part of itself—population, ideas, institutions—welcomes all comers.

Education, the great process of assimilation, evidently should receive more attention than any other function of our civil life. It should be conducted more intelligently. Our dangers, present or remote, should be kept fully and accurately in view.

Moreover, our society is of such a nature, the establishment of permanent caste is so impossible, the interchange, the flow and reflow of individuals through all stations, from the highest to the lowest, so constant and easy, that the conduct and character of any one man, woman, or child can in no sense become safely a matter of indifference to the other members of society. The moment of neglect is the opportunity of vice and crime. And the extent of neglect is the measure of the peril from these sources, and the index of the reduced productiveness of industry and of the losses of capital. Moreover, it should be remembered that this power of the individual, as a part of the whole, to affect the general welfare, arises not merely from his relation as a member of society; he has here an additional function of direct action as a part of the governing power. He is a voter, a witness, a jurymen; he may be a judge, a legislator, or executive. His character is, therefore, of consequence, not merely from its silent and general influence, but especially as actually constituting a part of the government, with a possibility of being called to the duties of office in town, city, county, or state, in every civil unit in which he is embraced. If the individuals who are idle, ignorant, vicious, criminal, increase so as to constitute the majority, the declared object and form of our government, so far as that unit is concerned, is perverted or destroyed, be it the civil unit of the town, city, state, or nation. We have multiplied illustrations of the possibility of this perversion of the excellence of republican institutions, in the small civil units. The great body of our people have a most abiding faith, however, in the impossibility of this perversion of the entire nation, and cite justly, with emphasis, the experience which brought our nation into existence, and has preserved it through the late most alleled struggle for the Union.

## IMPENDING DANGERS.

Looking at the beneficent results of universal education under any form of government, it would seem to command the approval of all fair-minded men. In view, then, of its imperative necessity in such a republic as ours, opposition to it from any quarter becomes well-nigh unaccountable. Yet every generation of adults, in every part of the country, in reference to the education of *all* the children in their midst, has, so far, in some form, to some extent, doubted, hesitated, presented difficulties, or shown hostility. Every generation of adults needs to be thoroughly indoctrinated with the sentiment of universal education, and familiarized with the management of school systems, as much as the children of each generation require the thorough and careful training of the school-room.

The late appalling struggle in our nation was not more sharply marked by geographical lines, than were the conditions out of which it arose characterized by broad demarkations indicating very closely the differences in systems and methods of education in the different sections. The statesman, whose confidence in the perpetuity of our institutions arises from the general intelligence and virtue of the people, on finding more than one-sixth of the adult population utterly illiterate, is appalled in view of the dangers threatened. In tracing still further the condition of the country in this respect, he finds that three-fourths of this ignorance is sectional, and to be found in the South.

## EDUCATION IN THE SOUTHERN STATES.

I would respectfully call attention to the carefully prepared abstracts of information from the Southern States, as they appear in the accompanying papers. They reveal a condition of facts calculated to awaken the most profound solicitude. No statement of them, however, can be so truthful and passionless as to pass unchallenged, so diverse are the views and so intense the feelings in regard to this subject. This diversity of feeling and action corresponds to the position of the different classes in the community.

It is clear that the final peace and harmony of these communities will require the satisfaction of the just demands of these various classes. They have clearly guaranteed to them the right to represent their condition, and, according to the forms of law, to seek its improvement. It is worse than useless to thrust these representations aside without consideration. The reasonable examination of these difficulties is the surest and speediest way to their removal.

The colored people, as a rule, seek with avidity a knowledge of letters. They instinctively associate ignorance, and the absence of opportunities to learn, with slavery, which has been abolished, and the privileges of learning with the freedom now guaranteed to them. All considerate minds may fitly receive this eagerness for gaining a knowledge of letters, on their part, as the grand opportunity for their elevation, to be made the most of before these aspirations are checked.

Instead of this reasonable treatment of the facts, there appears in many cases, a most blind prejudice against any and all efforts to improve the condition of the colored people by education. In some instances, this prejudice takes on the most violent forms of action. The conditions of poverty, and other forms of trial which followed the war, need not be rehearsed. The wide-spread absence of experience in the benefits of universal education, in those sections where slavery prevailed,



are well known and need not be repeated. In some instances, all the bitterness of a fratricidal war remains, while in other cases, men of eminence in the professions, and of the highest social position, accept, with a philosophy which we wish was universal, the new order of things that they find around them.

Turning their backs upon the past, which is gone, they set their faces resolutely toward a better future. Rising above the social proscription around them, and whatever of remorseless poverty any of them may endure, they apprehend the necessity and the benefits of universal education. They deserve all honor and most cordial support.

Joined with them in the work of education, as a rule, are those who have settled in this section from the North. The charity of the North and of Europe, the great benefaction of Mr. Peabody, and, more than all, the action of the General Government through the Freedmen's Bureau, have set on foot the establishment of schools in accordance with the ideas of universal education.

How severe the struggle, how hard pressed are the friends of education in this section, will appear from the accompanying papers. Without experience in the management of free public-school systems, without reports and publications from other localities, almost destitute of any literature upon free-school management and instruction, the present workers in the cause of education naturally appeal for aid to the General Government.

Were the communities they represent within the limits of the States in which free common-school systems are well established and efficient, the solution of their difficulty would be easy, and yet might be considerably delayed, as it was in the struggle for the establishment of free schools in some parts of Pennsylvania and Southern Illinois. But separated as they are from the great educational sections of the country by State lines and differences, many minds find insurmountable obstacles in extending to them any efficient aid. Are not the evils indicated by this state of things too immediate and far-reaching, too full of fatal threatenings to the existence of the liberties of the whole people, to warrant me or any other in obstructing a reasonable solution of the question by any exactions of our own?

#### NATIONAL AID.

Holding fast to all constitutional obligations and guarantees, respecting the privileges of localities and individuals and the cherished traditions in regard to our institutions, can we not afford to trample under foot all the minor dissensions of those who are agreed upon the necessity of universal education to the welfare of the individual, the municipality, and the nation; and by a generous forgetfulness of differences of sentiment between the sections, should we not, in the form of a national aid calculated to render successful the efforts of the friends of education scattered throughout those sections, inspire and guide in a friendly way the establishment of schools and school systems that shall yield the fruit so essential to the good order, peace, and prosperity alike of the community and of the whole country?

The more familiar I become with the facts in the case, and all the feelings associated with them, the more clearly I see, in some simple action of this kind on the part of the General Government, the solution of the difficulties under which all honest minds are ready to acknowledge we now labor. The moral aid in the way of argument and information, calculated to sustain and disseminate educational sentiment, now within the

province of this office to furnish, can be and should be greatly increased. But this plainly is not enough; something in the way of pecuniary co-operation is imperatively demanded.

#### TRADITIONAL POLICY OF THE GOVERNMENT.

From the days of the American Confederation, antedating the present form of government, until now, the use of the national domain in support of popular education, at the will of Congress, has been unquestioned. Mr. Clay aided in the passage of a bill for the use of the receipts from land sales to a certain extent, for the special benefit of certain specified States. Last year, contemplating the necessity now under consideration, and wishing to avoid what to some would seem questionable legislation in the interest of certain localities or States, and in view of the efficiency which could be given to education by additional funds, I recommended the appropriation of the net proceeds of the sale of the public lands for educational purposes throughout the country.

From the reflections of the past year and further examination of the subject, and an acquaintance with the public sentiment of the country upon this question, I again take the liberty of bringing this sectional necessity face to face with this net income of a million or a million and a half of dollars, from this source, for your examination and the consideration of the statesmen of the country. No interference with local rights is suggested. But the offer of pecuniary aid to the amount of ten or fifteen thousand dollars for each congressional district, on condition that a certain amount shall be raised by local means, and free common schools be opened for the benefit of all, conducted according to approved methods by the people themselves, would constitute a motive which would stimulate the friends of education in those communities, so as to render well-nigh universal the sentiment in favor of such schools. In this way, by a similar offer of aid, Massachusetts, Pennsylvania, and Illinois have succeeded, without any undue interference with sentiments of municipalities, in establishing schools in reluctant counties and towns. The wise and successful use of the Peabody fund in the South presents a variety of facts, illustrating and enforcing the propriety of this method of aid. How inexplicable must be the Southern feeling that would not speak kindly of a Peabody or a Sears!

Should the General Government extend this assistance, and thus in this kindly way aid in educating the children of the South, what reasonable father or mother could fail, however bitterly they may have previously felt, to begin to recognize this national and special endeavor to benefit them in their most vital interests?

#### DELAWARE.

In Delaware there is no State superintendent of instruction. The schools of Wilmington have made excellent progress under the management of an independent board of education. Those in New Castle are reported favorably, and are chiefly supported by an income derived from the rents of a thousand acres "common lands," which were set apart by William Penn for the perpetual benefit of the town. Schools in the remaining portions of the State, especially in the country districts, continue much the same; some are good; some very poor. No provision is yet made for the education of the colored people by the laws of the State. Whatever schools they have are the result of private effort. Several higher institutions in the State, among them the Delaware

College, which was revived by the grant of lands for agricultural colleges in the United States, are reported in a prosperous condition.

The intelligent interest manifested in Wilmington, the advantage of efficient supervision there, and the aid to teachers of normal instruction and training extended throughout the State, would soon put a new aspect upon its educational affairs.

#### MARYLAND.

Maryland still has no State superintendent exclusively devoted to the supervision of schools, but adds to the labors of the principal of the normal school the task of making up an annual report for the State. The examiners exercise a limited supervision throughout the counties.

The schools of Baltimore report good progress. They afford instruction for the colored children, but the general system of the State makes no efficient provision for the education of this large class of her youth. Schools for their instruction are, outside of that city, dependent upon private effort.

#### VIRGINIA.

The free-school system which Virginia was about putting in operation at the time of the last report, has, in spite of all difficulties and all forms of opposition, made steady progress. The State superintendent, Hon. W. H. Ruffner, has shown great ability, skill, and zeal in the performance of his difficult task. During the first year the number of free schools established was about 3,000, with as many teachers, and about 300,000 pupils; besides these, about 27,500 pupils were in private schools. The cities of Norfolk, Petersburg, and Richmond are all co-operating heartily in sustaining free schools, the city of Norfolk having 16 teachers and 865 pupils; Petersburg had 2,760 pupils. In Richmond the growth and prosperity of the schools has been marked, there being 73 schools, with an average enrollment of 3,300 pupils. The institutions of the State were aided during the year to the extent of \$25,000 from the Peabody fund.

The institution under General Armstrong, at Hampton, chiefly attended by colored people, is presenting opportunities for instruction in the industries, well worthy the study of all who are engaged in conducting schools for the practical training of the colored people.

#### WEST VIRGINIA

has not suffered the destruction of the free-school system that was feared; but less activity is reported in teachers' institutes, and in the use of other instrumentalities upon which the vigor and growth of the system must depend. The schools at Wheeling and Parkersburg are making commendable progress.

#### NORTH CAROLINA

has lost ground educationally, the legislature, last winter, having removed the clerical force of the superintendent, and reduced his salary, thus leaving the office with little capacity for hopeful and vigorous action. The severe proscription of colored people in the State has greatly discouraged their efforts for themselves. The particularly bright spot is Wilmington, where the efforts of Miss Bradley have been recognized by the city, and her school accepted as a public school. The colored schools in that city have also been well attended and efficient.

## SOUTH CAROLINA.

Of the schools in South Carolina very little favorable can be said. The friends of education struggle against overwhelming odds.

In Charleston the schools were closed months before the usual time, for want of funds.

## GEORGIA.

In Georgia the State superintendent has been active in pushing the organization of the school system, and has received the support of the wisest educators of the State. Local officers have been generally provided. But now many fear all that has been gained will be lost by adverse legislation. In Savannah, Columbus, and other points, there have been excellent white schools. The colored people have hardly been permitted to do what they would for themselves freely.

## FLORIDA.

The State system in Florida has made little or no progress, notwithstanding the ability and utmost endeavors of the newly appointed superintendent. St. Augustine, under the stimulus of the aid rendered by the Peabody fund, has shown a disposition to adopt a system of free public schools.

## KENTUCKY.

Kentucky is very far from establishing a sufficiently efficient system of schools for the education of the whites, and apparently refuses to recognize the desirableness or necessity of the education of the colored children. The late able superintendent made an earnest plea in their behalf, but the most that appears likely to be done, is setting apart the taxes collected from the colored people for school purposes for the education of their children. The schools of Louisville are taking a very good position.

## TENNESSEE.

Tennessee during the year has been considerably agitated upon the subject of general education. The legislature, dissatisfied with the destruction of the system of free schools which had been previously inaugurated, made repeated efforts to revise satisfactorily the laws which prevailed up to 1860.

Acknowledging the need of a central head to the system, and yet unwilling to meet adequately the demands for such an officer, they created an office of superintendent of public instruction, and thrust its duties upon the already overburdened State treasurer.

The effort to organize by counties resulted in some action in 23 out of the 94 counties of the State. In several instances the need of county supervision of schools has been recognized by the election of a superintendent.

The State treasury has been too much embarrassed to disburse any large amount of money for school purposes.

Many prominent men in the State are earnestly preparing for more vigorous action, asking the legislature to provide for the appointment and payment of a State superintendent, and for a fuller discharge of the State obligations in aid of general education, though with little chance of success. The colored people are most emphatic in the statement of the difficulties encountered by them in their efforts to educate their children.

**ALABAMA.**

Alabama, notwithstanding all the activity of her State superintendent, has, on account of lack of funds, suffered from the closing of schools prematurely in different portions of the State. The State tax is far from being adequate to the support of an efficient system, and few localities levy a special tax upon themselves.

The schools in Mobile, in spite of great difficulties, are making progress. The "Swayne" school at Montgomery, and the "Emerson" institute at Mobile, and other like institutions in the State, are doing good service for the colored people of the State, but they complain in many of the counties of great difficulty or of the impossibility of securing any school privileges.

**MISSISSIPPI.**

This office was notified by the State superintendent of the forwarding of a report somewhat in detail of the progress of education in the State of Mississippi, but it failed to arrive in time for insertion. He has put forth the most arduous and unremitting efforts for the success of the system of free schools, which have won the favor of many of the ablest men of the State. The opposition sometimes arising from indifference or lack of information, or a willingness to see the experiment carried on by others while taking no responsibility for it, has in other instances been violent, and not satisfied with using legal interposition to embarrass its progress and success, has taken on the form of direct assault, resorting to the whipping of teachers and burning of school-houses. It is believed, however, there have been not less than three thousand schools in operation.

**LOUISIANA.**

In Louisiana, the energy and zeal of the superintendent and those co-operating with him in labors for universal education are meeting with increased success, though there is hardly less opposition than formerly in the country parishes of the State. Some seven hundred schools, it is believed, are in operation outside of New Orleans. That city has been specially embarrassed in the conduct of its schools, on account of the lack of funds. The able city superintendent, under the direction of the board of education, has with rare skill guided the educational work of the city successfully forward in spite of threatening evils.

The State University, under President Boyd, is steadily gaining in excellence of scholarship and training, and the confidence of the public.

Straight University and other well-conducted private institutions for the benefit of the colored people of the city of New Orleans are attended by large numbers of students.

**TEXAS.**

Texas, the darkest field, educationally, in the United States, at the close of the last report, has passed an act to organize and maintain a system of public free schools for the State, which was approved April 24, 1871. May 9, a State superintendent was appointed.

How hard was the struggle for the introduction of the system, how violently it is opposed by its enemies, and warmly and strongly sustained by its friends, will appear in the accompanying papers. The governor, we are assured, is giving every aid in his power toward its success, recognizing the fact that education must underlie every permanent improvement in the State, whether material, social, or civil.

In addition to the hostile sentiment against free schools, Texas encounters, to a greater extent than most States, the difficulties arising from sparseness of population.

#### ARKANSAS.

Arkansas, though in some respects leading the majority of the States in which slavery has recently been abolished, in its manifestations of educational activity, has suffered from the reduction of the tax for school purposes, and has yet to make prolonged, energetic, and well-directed efforts before the final triumph of universal education in the State.

#### MISSOURI.

In Missouri the system of free schools has passed beyond the period of special peril. One county in the southern portion of the State was, up to a late date, reported without a single school sustained under the State system, and the prejudice against the education of colored children in that quarter is reported most unyielding in its opposition. The establishment of State normal schools and the progress of the State University, are particularly encouraging. Perhaps no city with so many elements opposed to progress has advanced so rapidly in educational development within the past few years as St. Louis.

The vacancy created in the office of State superintendent of public instruction by the death of the Hon. Ira Divoll, so widely and favorably known as an educator, has been filled by the appointment of Hon. John Monteith, who is zealously pressing the various instrumentalities of education toward higher success.

The Missouri School of Mines, at Rolla, on the Atlantic and Pacific Railroad, one hundred and thirteen miles from St. Louis, was formally opened on the 23d of November with 20 students.

#### STATES ON THE PACIFIC SLOPE.

The wild rush to the Pacific slope for gold has ceased, but a more abiding and no less earnest interest centers in all that pertains to that part of our country, territorially in itself an outlying empire. My recent visit afforded me special opportunities for an acquaintance with the facts in respect to the condition of education there. With an area of 365,704 square miles, it is nearly six times as large as all New England. Though traveling about 3,000 miles in passing within these limits, I could hardly secure more than an outline, a bird's-eye view, of a country presenting within its borders such varieties of climate and soil, such diversities of population. No brief general description can fully give the facts, and a statement of the exceptions cannot be undertaken.

#### CALIFORNIA.

California, with an area of 188,891 square miles and a population of 560,247, has already accomplished much and has done many things well, in the work of education, though much still remains to be done. The abstract of information in regard to this State has the merit of being prepared up to date, by Mrs. S. B. Cooper, a well-known writer, resident in San Francisco, who received every aid in her work from the State superintendent and other school officers.

The year has been marked by the erection of valuable school-houses in some of the leading points in the State, as in San Bernardino, Yreka, and Oakland. The high-school house at the latter place is a model of taste, convenience, and economy.

The State owes a debt that will never be paid to those who early undertook the educational work, especially to Hon. John Swett, for the adaptation of the school law to the diverse and peculiar necessities of its people. Its provisions are not optional with the communities, but mandatory. It requires the levying of certain taxes and their appropriation for specific educational purposes. It requires the election of certain officers, and of them the performance of specified duties. If there is a failure to carry out these provisions in any particular in any community, a few friends of popular intelligence may take the question to the courts and enforce the law. The result is the establishment and maintenance of schools in counties the most sparsely populated, and where the people are largely of a descent and antecedents from which indifference or hostility to universal education may generally be expected. Even in the most backward counties there has been progress. Teachers, school officers, and others, have sought for better results, while in the centers of population the schools come into the closest competition with the best in any of the older portions of the country.

The statute provides for an exact system of supervision over the whole State, and subordinate supervision for counties and cities. This has been the source of infusing life into all parts of the system. A small fraction of the school tax, set apart in every district, constitutes a fund for library purposes, and has multiplied these sources of intelligence in communities where otherwise there would have been almost an entire dearth of reading for the young. The library feature of the school law in California has been a success.

The present State superintendent has wisely refrained from interfering with the excellencies of the law, and the communities have the increased advantage from the non-interruption of its effect.

A State normal school has been located at San José, for which a new building has been erected. The State University, located at Oakland, is already doing an excellent work. Its preparatory department is full and prosperous, and, together with the high schools, academies, and institutions for secondary instruction elsewhere in the State, assures at an early day the preparation of a large number of young persons who will undertake and complete the highest courses of instruction provided.

In the busy life of new communities, where speculation is rife, superior education has often had to struggle for recognition and success; but the University of California has some problems presented, for its immediate solution, of the most practical and vital importance to the people of the State, and calculated to bring it at once into the most intimate popular relations. It has received the advantage of the national grant in aid of instruction in agriculture and the mechanic arts, and when the funds from this source are available, will have the means of organizing these departments.

The agriculture and horticulture of the State differ very widely from those pursuits in the older and Eastern States, and make special demands upon science to meet the new conditions and solve them successfully. Irrigation in many parts—a system which requires broad and intelligent treatment—must supply the moisture elsewhere furnished by abundant rains.

In addition, the differences of climate, both general and local, and the consequent effects upon stock-raising, resulting often disastrously to those who come from the older States, make an urgent demand upon the State for the general diffusion of scientific knowledge upon facts so vital to the prosperity of so many of its citizens.

So far, in the matter of irrigation and husbandry generally, all has

gone, as it happened, according to the intelligence or whim of the individual farmer, acting without scientific knowledge, and wholly without reference to the general welfare. The university, leading the men of science, can well demand of the State ample aid in making observations upon the soil, climate, fruits, and stock, the bearings of mountains, and direction of river-courses, and the fitness of the different localities for the several industries, until the facts are sufficiently in hand and a philosophical solution is reached, thus preventing many of the evils resulting from ignorance or monopolies. The same is true of mining.

Science would thus illustrate its friendship for man, and superior education vindicate its demands upon public attention by a practical demonstration of its usefulness.

The State schools, in charge of Professor Wilkinson, for the benefit of the blind and the deaf and dumb, in which both classes are accommodated in the same building, would be an honor to the oldest community.

The schools of San Francisco, however they may have suffered from the ebb and flow of public interest, constitute a system of many excellencies that has in itself the means of correcting mistakes and of increasing its efficiency as the public may demand. Among its officers and teachers there are some who have no superiors. The cosmopolitan schools, in which German and French are taught, are worthy of careful study by all city officers who have presented to them the solution of the question of teaching other languages than the English in the free schools. Mr. Henry Bolander, the principal of one of these schools, has just been elected State superintendent.

The free public schools of the city furnish for all its citizens who are anxious to preserve the young from the evils and temptations of city vagabondism, the grand medium by which their efforts may be made successful.

#### EDUCATION OF THE CHINESE.

Education on the Pacific coast has an additional interest from the fact that here our civilization stands face to face with that of China, Japan, and the other countries of the Orient. Here the Chinese have already come in large numbers, chiefly men—women coming only of the lowest character, and never as wives. Yet, Chinese children in San Francisco are numbered by the hundred; but neither there nor elsewhere in the State does the system of public instruction make any provision for them. So far as that is concerned they are outcasts; they are prohibited the opportunity of gaining intelligence and virtue. There has been, however, occasionally, instruction at public expense; but the schools for this class are almost entirely the result of Christian charity. The Chinese children are, to some extent, educated under their own teachers, according to the manner of their native land. Prejudice, interest, reason, and Christian principles are in great confusion in regard to the question of the method of treating these newcomers. Their industry is wanted, but in many respects their presence is abhorred. Certain points, however, seem plain; they should not be allowed to violate the police or sanitary laws, the rules and regulations necessary to social purity, civil peace and order, common cleanliness and health. Now, even while the prejudices are strong against them, they have been allowed to congregate on streets and in alleys, to concentrate in large numbers in restricted quarters, and, by the large rents paid, make encroachments into portions of the city once settled by the best people; and there, in the very heart of this thriving city, as if in the midst of paganism, gather every condition



of individual and public disease, immorality, vice, and crime. In the creation of these sources of vice, crime, and misery are the evils of the presence of the Chinamen, and not in any industry or honesty or skill in business that they may bring. Yet, they are more likely to be insulted, attacked, and injured in the pursuit of an honest livelihood than to be molested in the establishment and maintenance of these slums for the destruction of themselves and the American youth of the city. If the community would rid itself, as it plainly has a right to do, of these evils which are so manifest, there would be less ground for anxiety in the direction where complaints are loudest.

Unfortunately, proscription in the State, in the matter of education, has been carried out rigorously against the children of Indians, and often against the blacks. The schools for the Indians are exclusively under the control of the General Government. Many of these pioneer communities have yet to learn that they cannot afford to allow any one, however alien to their own race, to grow up in ignorance. A similar proscription extends throughout Oregon and Nevada.

In California the popular sentiment in favor of education is strong and active. The diversity of elements in their midst, and the dangers they threaten, have forced upon many minds a conviction of the necessity of universal education to public security. The question of enacting laws for compulsory education by the State has been widely agitated and vigorously maintained.

#### OREGON.

In Oregon, however, the educational sentiment is far less active and vigorous. This State, with 95,274 square miles, larger than all New England by one-half, has a population of 90,923, and a school population of 34,000.

This State, especially fortunate in the feature of the school law which requires a school-tax to be levied in every county, is unfortunate in many other respects. The executive of the State, in addition to his other onerous duties, is made by the constitution, superintendent of public instruction. The governor, assisted by the secretary of state, is, nevertheless, giving to this vital interest his special attention, the need of which is freely confessed by many of the best citizens of the State. So far separated from the other States of the Union, the educators of Oregon have received comparatively little aid in their difficult task from their coadjutors in the other portions of the country. Among a people rich in lands, the children are growing up with opportunities for education which are entirely inadequate to their needs, and there is danger to the State unless speedy action is taken. The sentiment in favor of attending school, of study, of the use of means for improvement, is not strong enough; it is too easy for the young to grow up in ignorance, and to become occupied with frivolities and vices.

The schools need to be at once made free from the tuition fees by which they are so often embarrassed outside of Portland and Salem. A local tax should be levied for every county, in addition to the State tax. There should be a well-qualified and competent State superintendent, whose efforts should be exclusively devoted to the preparation and presentation of arguments fitted to arouse public attention to this vast and fundamental interest; to catch, too, the attention of the young, and stimulate their aspirations, and to scatter throughout the State the information needed in regard to the building of school-houses, organizing districts, management of schools, qualification of teachers, and the best means for their success in instruction and discipline.

So far the wealth of the State has been little affected by the cultivation of science and skilled industry. The interesting and peculiar mineral resources have had no systematic, scientific investigation. However, a single citizen—the Rev. Thomas Condon, of Dalles—on his own responsibility and by his own researches, has attracted the attention of the world by collecting a museum unsurpassed in some particulars.

Every feature of culture, from the lowest to the highest, has the most ample room and scope in this State. Properly encouraged, and fostered by a vigorous system of public instruction, the addition to the wealth and prosperity of the State thus secured would be incalculable.

#### NEVADA.

Nevada, notwithstanding her sparseness of population, is making steady progress in promoting general education. Vigorous supervision gives life to the whole system, and adequate provision for the elementary education of all the children is proposed, except for such as are “unpopularly complexioned.” Salaries of teachers are decreasing. A high school has been established in Virginia City, the only one, it is believed, in the State.

The State depends upon California for the normal training of teachers and for the education of the deaf and dumb. The number of school-children is reported at 3,952. Of these, 2,988 are enrolled in the schools.

#### EDUCATION IN THE TERRITORIES.

After a careful examination of all the sources of information last year, the population of the District of Columbia and the Territories was put down at 700,000; the number of Indians more or less directly cared for by the General Government in the several States was found to be 100,000, making a total of over 800,000. For all this population the National Government is as directly and intimately responsible in all particulars as are the several State governments for their own citizens. No element of this responsibility more completely underlies all others than education. It determines both the capacity for sentiment and action.

In the early history of the Government a lively appreciation of this responsibility was shown. Few acts stand out more conspicuously in the annals of those times than the ordinances which determined the character of the civilization of the northwestern territory. Moreover, the early settlers were chiefly from those portions of the Union most advanced, and they were likely to be the most enterprising of the section from which they came. Foreign interference, possible or actual, in reference to boundaries, perhaps quickened public attention. Of this nothing now exists to excite apprehension or put the country upon its guard. The Territories are securely our own. Open, indeed, to immigration from all the world, portions of them are as fully controlled by the higher elements of our civilization as any part of the country, while in others foreign immigration is much greater than formerly, and in some, the mass of the population, as in New Mexico and Utah, are of foreign birth or parentage; thus presenting reason for anxiety that there should exist from the first all those institutions, especially common schools, upon which, in a peculiar sense, we must depend for the formation of a character fully in harmony with the sentiments and practices which elsewhere prevail, and which are the glory of our land.

It is not enough that the form of the institutions of liberty is recognized in the statutes and governments of these Territories. Those

instrumentalities calculated to inspire a love of freedom and an understanding and appreciation of its objects, customs, and laws, should be active, universal, and efficient. Of this, in the practice of the last twenty years, there has been no assurance. In that period such has been the failure to infuse universally into our territorial possessions those instrumentalities, that ignorance has actually largely increased in New Mexico, and Mormonism has made for itself a home in Utah.

#### NEW MEXICO.

It should be remembered, and cannot be too often repeated, that in 1856, on the question of the adoption of a law for the establishment of schools in the Territory of New Mexico, the vote stood 37 for and 5,016 against it.

It should be remembered that this is a Territory which, according to the census of 1870, has a population of 93,874, of whom 86,254 are of foreign—Spanish or Mexican—descent, and consequently do not speak the English language.

The secretary of the Territory, in a communication of recent date, says: "There are four or five schools under the supervision of the Roman Catholic Church, and two under the auspices of the Presbyterian board of missions. The attendance is very small, and *there is not a public school in the Territory.*" A simple statement of this fact ought to be sufficient to make the cheek of any honest American mantle with shame.

#### UTAH.

In Utah, with a population of 86,786, there are 30,702 of foreign birth, and 51,807, both of whose parents were foreigners; so that there now appear to be 21,105, who, although not foreign-born, are growing up under influences derived from those not born on our soil. Of the whole population, 25,333 are of school age. The territorial superintendent observes that the present territorial school system has been supervised and sustained without a dollar or an acre of land from the General Government. There is great complaint from the antipolygamists in the Territory that the teaching of Mormon tenets is made more prominent in the schools than instruction in letters or science.

#### COLORADO.

Colorado, with a total population of 39,864, and a school population between five and twenty-one of 8,593, reports an enrollment in the public schools of 5,345. The total expenditures for school purposes are reported as \$98,105. These figures contrast favorably with those of some other Territories.

#### NEED OF TERRITORIAL SCHOOL SUPERINTENDENTS.

Does not a just consideration of the vast interests involved in these Territories, present and prospective, require, on the part of the General Government, at least an intimate knowledge of the facts, and that the moral support of the national sentiment should be extended to them? There can be no question raised as to the responsibility of the Government. The laws of Congress are the basis of their organization; the officers are appointed by the President, and held responsible to him.

A systematic report of facts with regard to education certainly is the least that could be expected, and would, of itself, be of great value.

I am, however, decidedly of the opinion that it would be altogether for the interest of the Territories and the country if a new office—that of superintendent of public instruction for each Territory—were created, the appointment to be made by the President, and payment provided for as in the case of other territorial officers, who should devote himself exclusively to the work of disseminating ideas upon educational subjects, the instruction of teachers, and aiding in the establishment of schools under such laws as the Territories may adopt, and who should be required to make an annual report of his work and the condition of education to the governor of the Territory and to the General Government. Nor can it be doubted that to extend pecuniary aid, in justifiable circumstances, would be a wise measure of statesmanship. Such adequate attention to the establishment and management of schools in the Territories would afford additional means and assurance of success in the education of the Indians within their limits.

#### DISTRICT OF COLUMBIA.

The citizens of this District frequently call attention to the fact that they have never received the aid to public education which has been granted by the General Government to the citizens of the respective States. In their recent endeavors to establish a free-school system they have been greatly embarrassed by circumstances resulting from the war. It has been for them very much like beginning anew. Besides the special demand for the provisions of education for the colored children in the District, a very large population of those formerly slaves has centered here from the surrounding States, who have added to the necessity for an increased number of schools, although furnishing little capital upon which a tax can be levied for their support. It will be noticed that out of sixteen cities in the United States the city of Washington has a much larger percentage of pupils taught in rented buildings than any other, and that of twelve cities reported it pays the highest tax on the dollar for school purposes. These facts, taken in connection with the aid extended to education, particularly in the new States, by Congress, evidently justify the strong conviction entertained among the residents of the District that strict justice on the part of the General Government in meting out favors to all citizens of the country alike, warrants them in asking for a special grant of aid in support of their schools.

We are indebted to Charles King, esq., for aid in collecting facts in regard to the schools for colored children, and to J. Ormond Wilson, esq., the efficient superintendent of the schools for white children, for information in reference to them, as well as for statistics which he has to some extent grouped together concerning the entire District. The ease with which this could be done in a volume under the present form of government, and the value of such a report to the officers of the District and to Congress, are apparent. The lack of system and unification in the educational work in the District of Columbia, to which attention was called in my last report, is more and more recognized by thoughtful educators, and there is a growing disposition manifested to put the school work on a better basis. This would, undoubtedly, by largely increasing the attendance, facilitate the development of a high school, and the establishment of special schools, which are so greatly needed. The Seaton school-house, a commodious building with many improvements in respect to internal arrangement, has been dedicated during the year with interesting ceremonies.

Special efforts have been made to dispense with corporal punishment in the schools of Washington, as far as this could be done without impairing discipline. The superintendent, Mr. Wilson, says this resulted in a reduction of the number of cases per month more than 100 per cent. for four months, when the publication of a bill which had been introduced in the board of aldermen, declaring it to be unlawful to inflict punishment upon the person of any pupil, was followed by exhibitions of disobedience and defiance of authority to such an extent as to increase the number of cases of corporal punishment from 32 to 97 per month. The bill was defeated and the number was again reduced.

The same effect was produced by the publication of this proposed law upon the colored schools. The superintendent, Mr. Newton, says that a spirit of insubordination and defiance broke forth, indicating the disaster that would have followed the enactment of the law.

T. C. Grey, esq., has furnished me very full statistics in regard to private schools in this District. He gives a record of 122 schools, having 5,477 pupils, reporting an average attendance of 5,287. The attendance in 73 schools is reported as increasing, and in 20 schools as decreasing, while 27 remain stationary.

#### EDUCATION OF THE INDIANS.

The extent to which the statements in regard to Indian education in the last report were demanded and used, has prompted me to continue the collection and dissemination of facts with regard to the subject. Among the accompanying papers will be found a *resumé* of progress in Indian education.

The increase in the number of Indian schools for the year is about 150, and the increase of attendance amounts to several thousand.

After a careful examination of the reports by Indian officers, teachers, agents, and others at work in their interest, it appears that their testimony for twenty years is unanimous as to the desire of the Indians for education, and of the men for instruction in the various industries.

The suggestions in the last report might be fitly renewed. Men are manifestly needed for this work, not only of uprightness of character, but of the highest degree of qualifications as teachers. Much of the failure from the efforts made in the past may be undoubtedly assigned to mistakes in theory and methods.

The education that attempts to do this work for the child, fully occupied as he is with the activities of sense, by the presentation of subjects in a purely abstract form, fails of its end, because it fails to secure the attention of the child. To obviate this difficulty the methods of nature have been observed and "object lessons" invented. The first essential step in teaching is to secure the attention of the learner, this holds good as well in the case of the adult as of the child. Mentally, in all that relates to the teaching of civilization, the Indian is but a child, and if taught at all, it must be by the same processes which are found successful with children.

The methods of education must come to the Indian where he is, and be adapted to him as he is, and take him by natural steps through the courses of instruction that he is capable of receiving. He is thoroughly sensuous; abstraction is obnoxious to him. He is accustomed to roaming; confinement he dislikes. The Indian school, whether for young or old, should begin by appeals to the mind through the senses.

It is gratifying to observe that, here and there, as in the case of Af

Clarke among the Chippewas, and of Superintendent Meacham in Oregon, this idea has been caught and partially carried out in the preparation of charts and other objects to represent to the eye the subjects to be taught. The great interest involved in this direction would suggest a considerate and ample appropriation for the supply of proper aids of instruction in the Indian schools, under the auspices of the Government, such as charts, maps, and apparatus of suitable kinds. A unique "panoramic apparatus" furnished this office deserves special mention on account of its adaptation for such a use.

Persons engaged in this work are generally inclined to recommend a separation of the children from their parents. This, in cases where the parents are utterly degraded and resist the salutary influences of instruction upon the children, may have its advantages. There are undoubtedly instances in which it is altogether best that the children should be entirely removed from all the home influences of savage life; but, on the other hand, where the instructions communicated to the children, and other associated influences, can produce some corresponding elevation on the part of parents, the children, on closing their school attendance, may be considered less likely to retrograde. Indeed, the more all the natural associations of the child—paternal, filial, and social—are favorable, the more sure are his attainments. The boys cannot be made virtuous and intelligent while the girls are neglected, and *vice versa*.

The demand for secondary and superior instruction among the Indians has been chiefly met by a transfer to the schools of the States. There have been illustrious cases of success in these efforts; but are they, or can they be, adequate to the demand? Manifestly a successful elevation of the Indian requires that a larger proportion should receive higher instruction and training. This can only be done within their own limits. There, too, it could be better adapted to the characteristics of the tribes which are to be instructed. True, the number coming forward for this higher training will be few in any one locality; but could there not be, in a comprehensive view of the whole field of Indian education, a place selected and a sufficient number of interests grouped to warrant the establishing of such a training school? Suggestions of this character have already been made in connection with the Indian Territory, and could, with the aid of the Government, be readily carried out. Evidently it should embrace not simply instruction in letters, but in the industries; not only teachers of schools could be taught, but instruction should be given in farming, stock-raising, forestry, gardening, harness-making, house-building, tailoring, dress-making, &c.; and in a few years the Indian men and women thus taught would be scattered abroad and would disseminate the benefit of their instruction, not only doing the good which must be the result from their work directly, but illustrating before their tribes what the red man is able to do for himself, thus arousing and definitely directing by their example the aspiration of others.

The success which has attended the various efforts to locate the Indian population upon reservations presents gratifying results. The facts, in spite of exceptional cases, are calculated to convince the most skeptical of the soundness of the policy of peace and honesty. Those who have observed the progress of races from barbarism to civilization, easily mark some of the distinctive steps. These, of course, may be modified by the climate, soil, and peculiarities of their location. The more southern sections occupied by our Indians have not a few resemblances to the region which was the early home of the human race.

Farming, after the style of our Middle and New England States, is hardly possible there. Stock-raising and the culture of the orange and the vine are easy and more profitable. It is not difficult to picture the Indian in those regions passing through the same steps as oriental nations to a higher civilization. He leaves war, hunting, fishing, and takes on the habits of pastoral and agricultural life only by degrees, until, divested of the tastes, ideas, and associations of the war-path and nomadic life, he comes to live his own life in his own well-kept house with his own children, caring for his own stock on his own well-tilled farm.

Facts in the history of the Indians in Western New York and among the Chippewas and Stockbridges, as well as the Cherokees, Choctaws, Creeks, Chickasaws, the Nez Percés, and the Indians at the Fort Simeoe reservation abundantly warrant these expectations. The dissemination of facts of this character is especially demanded to correct the sentiment so hostile to the Indians by the whites in their immediate vicinity. The sooner and the more completely the sentiment of those living in the neighborhood of the Indians shall become friendly and directed to their elevation instead of their degradation, the sooner will the present wise policy of the Government toward the Indians be successful. The school systems of the States in which there is a considerable population of Indians, as Oregon, California, Nevada, Minnesota, and Wisconsin, could be instrumental in solving this difficult problem, by including and enforcing the education of Indian children.

#### NATIONAL SCHOOLS OF SCIENCE.

The recent grant of land by Congress in aid of superior instruction, intended to be specially promotive of science in its application to agriculture and the mechanic arts, the great industries of the country, yet not excluding classical learning, has given a new and important impulse to education, resulting in the establishment of what may be termed national schools of science, either on an independent basis or associated with older colleges and universities.

The field is new to Americans, and the methods adopted here must be measurably experimental and tentative in the absence of the experience of the Old World. The gentlemen responsible for their management seek the most accurate and full information in regard to the objects aimed at and methods adopted by their fellow-laborers.

In view of the interests involved, I have, with your approval, committed the inquiries in regard to these establishments, and the statement of their experience, as bearing upon education, to a gentleman fitted in an eminent degree, by his acquaintance with scientific education both in Europe and America and by his position as professor in the Sheffield Scientific School at New Haven, to secure the hearty co-operation of his colleagues and to bring out the most satisfactory results for the benefit of the public. Attention is particularly invited to his able report.

From the table of national schools of applied science the following appears as the summary of statistics up to date:

#### *Institutions receiving the Government aid.*

Number of instructors in twenty-four reported.....	180
Number of students in twenty reported.....	1,950
Average number of students.....	97
Institutions having libraries.....	4
Volumes in all the libraries.....	10,000

rejected, and were thus unable to respond to my inquiries. The following schedule presents the results obtained:

*Schedule of examinations for admission to the freshman class of the following six colleges (all that responded to inquiry) and the two United States academies.*

No.	Name.	Total candidates.	Total accepted.	REJECTED.											
				Total.	For deficiency in—									Writing.	Spelling.
					Latin.	Greek.	Higher mathematics.	Arithmetic.	Grammar.	Geography.	History.	Reading.			
1	Amherst College.....	66	62	4	15	17	38	...	6	...	...	...	...	7	
2	Bowdoin College.....	66	59	7	7	7	6	...	...	...	...	...	...	7	
3	Columbia College.....	36	29	7	2	2	7	...	...	...	...	...	...	...	
4	Brown University.....	66	61	5	4	1	...	...	...	...	...	...	...	...	
5	Hamilton College.....	48	45	3	...	2	1	...	...	...	...	...	...	...	
6	Williams College.....	27	*20	1	...	1	...	...	...	...	...	...	...	...	
Total reported, six colleges.....		309	276	27	28	30	52	...	6	...	...	...	...	7	
U. S. Military Academy.....		119	77	†42	...	...	...	15	24	14	22	3	§10	...	
U. S. Naval Academy.....		97	71	†26	...	...	...	21	10	11	...	...	§15	...	
Total in the two U. S. academies.....		216	148	68	...	...	...	36	34	25	22	3	25	...	
Total in the two U. S. academies } and six colleges.....		525	424	95	28	30	52	36	40	25	22	3	25	7	

\* Six conditioned.

† Eleven rejected on account of physical disability.

‡ Three rejected on account of physical disability.

§ This includes orthography.

#### COLLEGES SHOULD REQUIRE A KNOWLEDGE OF ELEMENTARY ENGLISH STUDIES.

The entire absence of any uniform method of keeping suitable records among the different institutions renders it exceedingly difficult to secure satisfactory statistics. It will be observed that the failures reported from the Military and Naval Academies are still in elementary subjects, while the several colleges reported do not indicate uniformly any examination in the common English branches. I would earnestly commend these facts to those in charge of our colleges, who can hardly desire that their future graduates shall not be well trained and thorough in the common English branches as well as in those subjects which are pursued under their own care; and would suggest for their consideration whether they cannot do much to aid teachers in elementary and secondary schools in securing the desired thoroughness in these branches by including in the examination of candidates for admission to their institutions an examination in the elementary studies. The law of supply and demand is applicable here as elsewhere. Have not these institutions an opportunity, by making this thoroughness in elementary English studies a requisite for admission, to be of great service to the community in raising the standard of secondary education throughout the country? If there is a sufficient demand for thoroughness in these subjects, the supply, beyond question, will be promptly furnished.

#### HAZING.

The barbarous practice of hazing has never been completely exorcised from American institutions of superior instruction. The growth of pub-



lic opinion against it has been great during the last half century. Home and public influences have largely co-operated with the advancing sentiment of the officers of educational institutions.

Recent special manifestations of this relic of the dark ages, in some of the colleges, and in the Naval and Military Academies, have deservedly met the most vigorous treatment. The intolerable nature of these practices, which often violate the rules of common decency, and sometimes leave permanent bodily injuries, should be understood by the public and by parents, that they may be duly abhorred, and the day of their absolute banishment from all institutions be hastened.

By a late order of the Hon. W. W. Belknap, Secretary of War, a number of the cadets at West Point "are dismissed the service of the United States," and several others are furnished with furloughs, for "treating with violence and harassing other cadets." At the Naval Academy, also, several of the midshipmen have been found guilty of "coarse, cruel, and oppressive conduct" toward other members of the institution, and have had their names "dropped from the roll," in pursuance of an order from the Hon. George M. Robeson, Secretary of the Navy, who declares that "though mere youthful vivacity and mischief may be often overlooked, persistent blackguardism will not be tolerated."

#### EDUCATION AND ORPHANAGE.

The results of our inquiries in regard to education and orphanage cannot be included in this report, but I hope yet to present a valuable summary of these facts.

There is a growing conviction that the great evils suffered by society can be largely reduced by seizing every instrumentality to render possible the instruction and virtuous training of every child. More and more it is apparent how largely the seeds of mature criminality are sown in childhood.

Mr. Mundella, M. P., in a recent address, after observing that he had sat for six months upon a royal commission examining into the details of vice in England, declared that "more than 25 per cent. of those poor wretches who barter the sanctity of woman for the wages of lust were under sixteen years of age." Society, unless constantly observant of its own conditions, may be unaware of the extent to which necessity operates in forcing, or seeming to force, individuals into courses of vice and crime. Mr. Mundella again observes: "Evidence was placed before me of an indisputable character that there were 30,000 women and children working in the brick-yards, many of the latter but six or seven years old, carrying from morning till night lumps of clay equal actually to their own weight in the scales." My own observations and those reported to me by others give me a profound apprehension of the accumulation of these necessitous conditions in this country. It is gratifying to witness the extent to which private charity seeks to remove these evils by preventing them. But this interest is too vast to be trusted to the variable action of charity. All the property and all the people in any community are closely interwoven with it, and should by organized civil action make adequate and fit provision for the care of all dependent children.

#### PROGRESS TOWARD UNIVERSAL EDUCATION IN AMERICA.

The statistics of American ignorance are far from encouraging. There are, however, signs of progress toward universality of elementary edu-

cation. The conviction of its desirableness, and even of its necessity in a republic, is steadily taking possession of thoughtful minds. The statement of the argument grows in completeness and fullness with the increased correctness of educational reports and statistics. The evils visited upon other lands, through public ignorance, and the perils threatening our own country from the same cause, have quickened and extended the desire for education throughout the country. There is an increasing demand for information on these subjects; the press is discussing them with greater frequency. In addition to the general provision of systems of education, whether old or new, there has been additional effort to bring their benefits within the reach of every child. Numerous expedients have been tried to accomplish this object. During the year, Michigan, Texas, and New Hampshire, seeking to reach this result, have enacted laws enforcing the education, in some manner, of every child of sound mind and body. The same proposition has been earnestly discussed and came well-nigh adoption in other States. In many instances legislation has attempted to approach the same result by separate and special enactments against vagabondism, against the employment of children in factories during certain ages, and against truancy.

#### TRUANCY LAW IN BOSTON.

Upon this last point no city in the country has had a longer experience, or more carefully observed its effects, than Boston. For some time the reports of Hon. J. D. Philbrick have constituted the chief authority on the subject in this country. He has recently reviewed its history in that city, and presented to the public the results of the experiment. The first act relating to this matter was passed in 1850; but it was not till two years later that truant officers were appointed. To remedy the defects which had been revealed in enforcing the system during a period of ten years, a supplementary act was passed in 1862, and subsequently other modifications were made, until about 1865 the truant law was so far perfected and extended that its administration had become not only efficient and humane, but was deemed an indispensable feature in public education in securing salutary control and instruction to many children who would otherwise be deprived of these blessings, and in rescuing many from dangerous exposure to evil and ruin. Since 1867 the truant system, somewhat further modified, has continued in successful operation.

#### NEGLECTED CHILDREN.

While the truant law has continued to be executed with increasing vigor and benefit, the act of 1866 concerning neglected children remained unadopted by the city council for four years, but was reported and passed in July, 1870.

By this act the cities and towns may make provisions and arrangements concerning children under sixteen, who by reason of the neglect, crime, drunkenness, or other vices of parents, or from orphanage are suffered to grow up without parental control and education, and exposed to idle and dissolute lives. The municipal authorities may, under this act, appoint suitable persons to make complaints of any violations of the ordinances and by-laws on this subject; and certain courts, specified in the act, may order children thus exposed and neglected to such institutions of instruction, or other place as may be assigned for the purpose. Provision is made for the return of the children to their parents *when the causes that led to their neglect and exposure are removed.*

The class of children to whom this law applies is one not guilty of any offense; they are simply children suffering from *neglect*, in circumstances exposing them to ignorance and crime. The law is designed to come to their relief, not to punish or reform them, but to give them the nurture, care, and education of a home and a school. It is a beneficent provision, intended not for sinners but for the sinned against. It seems an incongruity, therefore, that this class of children should be placed in an institution having the character of a penal reformatory, however good it may be of its class.

#### LAW LIMITING AGE OF WORKING CHILDREN.

Another important measure adopted in many of the States as a step toward the assurance of universal education is the enactment of laws concerning the employment of children under a specified age. Complaint is made of the inefficiency of the execution of this law in Massachusetts. Its working in Connecticut is considered more satisfactory. The law of the latter State declares, in section 1, that *no* child under the age of fourteen *shall* be employed to labor \* \* \* unless such child shall have attended some school at least three months each year, fixing the penalty for its violation at one hundred dollars. Section 2 makes it the duty of the State's attorney to make presentment before the grand jury of all such offenses. Section 3 authorizes the State board of education to take the necessary action for the enforcement of the act, and to employ an agent for the purpose. The State board, immediately on the passage of the act, gave notice of their purpose to enforce its requirements, and the energetic efforts of Secretary Northrup have been seconded by the manufacturers, many of whom have, in accordance with his suggestion, not only co-operated in enforcing the provisions of the act in behalf of minors, but caused notices to be put up in conspicuous places so as to meet the eye of all concerned, declaring that no children under fourteen years of age will be employed in their factories unless they have attended school as required by law. The proprietors of other establishments have also given notice that they are required to see that all persons in their employment under twenty-one years of age are able to read and write and familiar with the elements of arithmetic; stating that the public schools are open to all, and the evening schools, for all over fourteen, from October to April. The salutary effect of this action and sentiment is apparent.

The practice of establishing evening schools as a part of the public system is also gaining favor. Numerous instances of beneficial results are reported. I cannot too strongly urge attention to these variations of the hours of instruction as a modification of the public system to the necessities of the laboring classes.

#### EDUCATION AND CRIME.

The teacher who would understand fully the benefit of an early and proper education of the young, must include in his observations the effects of its neglect. He must not only go to the workshop, the editorial room, the publishing house, and the University, but observe carefully the population gathered in reformatories and prisons. He will recall the axiom, that whatever exposes men to commit crime is a source of crime. In 1866 there were 17,000 persons reported in the prisons of the United States. Had the teacher questioned these as to the cause of their crime, a very large proportion would have pointed either to total ignorance or a neglect or perversion of education in their youth.

The statistics on this subject are very imperfectly kept. Prisons and reformatories in some parts of the country keep no record of the intelligence of the persons committed. In New England these statistics have, in some cases, received considerable attention. Esteeming them measurably accurate, I have secured the preparation of an article on the relations of education to crime in New England, from an able and scholarly writer and a careful observer. In presenting his views he gives, after a critical examination of the literature on the subject, the results of information obtained by personal visits and observation, and comes to the following conclusions:

I. At least 80 per cent. of the crime of New England is committed by those who have no education, or none sufficient to serve them a valuable purpose in life. In 1868, 28 per cent. of all the prisoners in the country were unable to read or write. From 3 to 7 per cent. of the population of the United States commit 30 per cent. of all our crime, and less than one-fifth of one per cent. is committed by those who are educated.

II. As in New England so throughout all the country, from 80 to 90 per cent. have never learned any trade or mastered any skilled labor; which leads to the conclusion that "education in labor bears the same ratio to freedom from crime as education in schools."

III. Not far from 75 per cent. of New England crime is committed by persons of foreign extraction. Therefore 20 per cent. of the population furnishes 75 per cent. of the criminals. It is noticeable, however, that "the immigrant coming hither with education, either in schools or labor, does not betake himself to crime."

IV. From 80 to 90 per cent. of our criminals connect their courses of crime with intemperance.

V. In all juvenile reformatories 95 per cent. of the offenders come from idle, ignorant, vicious homes. Almost all children are truant from school at the time of their committal; and almost all are the children of ignorant parents. These children furnish the future inmates of our prisons; for "criminals are not made in some malign hour; they *grow*." In the face of these facts, what can be said but this: "Ignorance breeds crime; education is the remedy for the crime that imperils us."

For the purpose of reaching as accurately as possible the relation of education to crime, I have continued the inquiries in regard to the criminal population of the country, so far as gathered in reformatories and prisons. Changes in the forms of the inquiries, with a view to ascertain more specifically the relation of the neglect or misdirection of education to the evils of crime, as affecting not only the criminal but the descent of these effects from generation to generation, have rendered the answers more difficult, and consequently less full. It is to be hoped that the facts bearing upon these points may be more carefully observed and more fully reported in the future.

Educators may well seriously inquire whether the tendency of the systems they are conducting are as thoroughly promotive of the practice of virtue as they ought to be and can be. Is not the standard of promotion, from the lowest class in the elementary to that of the graduates from the highest professional school, limited too exclusively to intellectual attainments and not sufficiently inclusive of moral character, or that resultant of all the qualities expressed by the one word "conduct?" Are there not here suggested profound reasons for a revision of our ideas of education? If the demand in the schools and for promotion in the various spheres of life is for intellectual sharpness only, can we expect the young to value or to produce much else? Yet no one contemplating the means of promoting individual good or the public wel-

fare can be satisfied with an education which so intensifies intellectual activity as to overlook the necessity for the training and direction of the moral nature.

Dr. Tayler Lewis remarks with great force:

Experience has abundantly shown that no amount of mere fact knowledge, or of scientific knowledge, in the restricted modern sense of the term, can give security that the man possessing it may not turn out a monster of crime and a deadly scourge to society. Of itself we mean, or in its direct effects, for as an aid to a higher position among men, and thus as furnishing a worldly motive to correct outward behavior, it might, undoubtedly, operate as a salutary check. The same may be said of the pursuit and acquisition of wealth, or of anything else that gives rise to a worldly prudence taking the place, for a time, of moral principle. When this, however, is not the case, or such an education gives less distinction by being more and more diffused, then, instead of a check, it may become a direct incentive to crime by creating increased facilities for its commission.

Evidence is constantly accumulating that the processes of the burglar, of the incendiary, of the counterfeiter, of the poisoner, of the railroad destroyer, of the prison-breaker, of the abortionist, &c., are actually making progress with the progress of crime. They are becoming arts, whether we rank them among the elegant or the useful.

There is reason to believe that before long books may be written upon them and that there may be such a thing as a felon's library. The same may be maintained in respect to what may be called the more speculative knowledge. When wholly destitute, as it may be, of moral truth and moral intuitions, it may only wake up the dormant faculties of the soul for the discovery of evil and make them all the more acute for its perpetration.

In connection with these opinions of Professor Lewis, another distinguished educator's testimony to the practical importance of the moral element in intellectual training is in point. The position, experience, and labors of President McCosh, of the College of New Jersey, have given him peculiar opportunities for judging its practical value. In his address at the one hundred and twenty-fourth commencement at Princeton, speaking of the system of examination for political appointments in Great Britain, while admitting "that the system is not absolutely perfect," he claims that those appointed by that method "must, from the very fact that they stand such a scrutiny, be possessed of good abilities;" that "in order to acquire the necessary attainments they must be be possessed of industry and application;" and that no one "who has spent his youth in idleness or vice can succeed at such an examination, which secures that the person appointed is usually of good moral character."

Thus, not only does deep and thorough moral training, on the one hand, tend to correct the abnormalities of men like Ruloff, but, on the other, it sharpens and renders effective for individual and public good the application of the intellectual faculties.

The teachers of the country will be interested in observing the result of the International Congress on the subject of the prevention and repression of crime proposed by the National Prison Congress, held in Cincinnati, an account of which is contained in my last report. The able philanthropist, Rev. E. C. Wines, LL.D., probably the best informed on this subject of any one in the world, on bringing the subject to the attention of the President and of Congress, was gratified by the unanimous passage of a resolution by Congress authorizing the appointment of a commissioner for the presentation to an international congress of the further consideration of these subjects. The President promptly appointed Dr. Wines commissioner, who, after a conference with the various ministers from foreign governments resident in Washington, sailed for Europe in pursuance of the objects of his mission, and reports the most gratifying reception on the part of the heads of the

governments and leading philanthropists, and that he has already arranged for the meeting of an international congress, for the study of the questions connected with the prevention and repression of crime, in London, on the 3d of July, 1872. Among the questions which it is proposed to consider at that time are: 1st. Whether compulsory education has proved, or is likely to prove, a useful agent in the diminution of crime; what is the true place of education in a prison system; whether prison officers should receive a special education and training for their work, thus raising the business of prison-keeping to the dignity of a profession, and giving to it a scientific character such as belongs to other great callings of society.

#### EDUCATION AND INSANITY.

I have continued the efforts reported last year to collect facts upon the relations of education and insanity. Inquiries intended to bring out the facts in regard to the patients now in the several asylums for the insane in the country were addressed to the superintendents. Increased interest is manifested by these gentlemen in the subject, while they report the difficulty of ascertaining correctly the facts. I hope, however, by the continued aid of their experience, yet to reach results that will be of special value to those engaged in training the young. Many believe, and remark in general terms, that insanity is often due to causes that might have been overcome by proper training in the early life of the individual; and the inquiry should be pressed until specific conclusions are reached, but considerable time must necessarily elapse before records can be accumulated upon which these results depend. In the mean time I have had an article prepared upon this general subject by a gentleman who is recognized as an authority upon all questions relating to the statistics of insanity.

#### NEWSPAPERS.

The demand for facts with regard to the press as an educator induced me to secure the preparation of an article on the subject. Its able writer has grouped together an invaluable collection of facts upon this great educational agency. The number of newspapers taken and read in different localities will be found a valuable measure of their growth in intelligence.

#### TEACHING DRAWING IN THE PUBLIC SCHOOLS.

There has been great backwardness in introducing instruction in drawing in the public schools of the country. A certain imitative use of the pencil for so-called ornament has been chiefly taught. The instances of teaching free-hand drawing that might be at once useful and ornamental have until recently been very rare.

Of the value and importance of this training, Professor C. O. Thompson, of the Free Institute of Worcester, Massachusetts, observes: "The importance of a knowledge of drawing received in its relations to arts and manufactures can hardly be overestimated. It is conceded by all intelligent people. It is to the practical man, whether mechanic, manufacturer, engineer, or builder, what language is to the professional man. Drawing is indeed the language of form. A master workman is almost as helpless without it as a scholar would be without the ability to read and write. To pursue this figure a little further, a knowledge of draw-

ing enables the student to discern the elements of the beauty of all good pictures and all fair forms, whether in nature or in art, just as literary culture brings within his reach the treasures of books. It is clear that the proper time to learn the elements of drawing is in childhood, and it is surprising that we have allowed so many generations of children to go through the public schools without any instruction at all in so important a branch.

"A vigorous movement is on foot in Massachusetts in two directions: first, toward introducing drawing into all the schools of the State; and second, toward providing instruction in evening classes for artisans, engineers, teachers, and other persons who cannot be spared from their usual avocations in the day time. This movement sprung from the newly awakened interest in technical education, which is one of the marked features of the present phase of educational activity.

"Almost all the large towns and many of the smaller ones now require drawing to be taught in their public schools. The only available method has been to provide the pupils with drawing books containing set copies and rules, the teacher guiding as well as a man can who knows very little of the subject. Of course it is not to be expected for some years that teachers will be expert draughtsmen, or understand even the elementary principles of drawing, unless some new vigor should be displayed by committees in finding normal graduates, or some new efficacy should be given to diplomas of graduation from a normal school.

"In the city of Worcester the teachers have a good opportunity to learn drawing in the classes opened from time to time at the technical schools and in the evening classes, to be described hereafter. Just as soon as teachers become at all self-reliant they instinctively abandon all text books and develop the subject on the black board. In the city of Boston a very hopeful movement is in progress. Mr. Walter Smith, formerly art master at Leeds, England, and a graduate of South Kensington, has been secured in the threefold capacity of normal teacher in Boston, under the general direction of the school board; art inspector to the State under the board of education; and supervisor of drawing at the Massachusetts Institute of Technology. Under the last head he meets four submasters once a fortnight, and gives them a dictation lesson from 10 to 12 o'clock. Then these masters, under his general supervision, proceed to repeat this lesson to the teachers of the city, who repeat in divisions till 4 o'clock in the afternoon. These teachers repeat the lesson in their respective schools during the interval between their own lessons. It is hoped that this dictation method will gradually replace entirely the drawing book. Similar experiments will be made at the normal schools.

"Some method of normal instruction to teachers, essentially like this, must be at the foundation of all effective efforts for introducing drawing into public schools, since it is clearly proved that a person need not be an expert draughtsman to teach the principles of drawing. He must, however, understand thoroughly the elementary principles of form and proportion. The efforts thus far made in favor of our schools relate only to free-hand drawing. In Fall River, Taunton, Cambridge, Charlestown, Springfield, and New Bedford, classes numbering from one hundred and seventy to four hundred were organized on essentially the same plan as at Worcester, and successfully taught."

Hon. Joseph White, secretary of the board of education of Massachusetts, commending the efforts made in the State to introduce drawing, very emphatically observes:

Let these schools be opened in all our manufacturing towns, and we may expect to find—

I. A great improvement in respect to the taste and skill exhibited in the various products of industry.

II. A rapid multiplication of valuable labor-saving machines.

III. And better than all, an increase of the numbers, and a manifest advance in the intellectual and moral condition and character of the artisans themselves. In proportion as the intellect asserts its sway over mere force, as the cultivated brain controls the hand, labor ceases to be a drudgery and becomes a source of pleasure and delight; it is no longer a badge of servility, but an instrument of power.

His recommendations are worthy of being repeated throughout the country for the benefit of every manufacturing town. Indeed the efforts for the training of mechanical skill are so rapidly spreading in all civilized lands that only by a corresponding attention to these elements of instruction can our manufacturers hope to compete with those in other quarters of the globe.

#### SCHOOLS OF DESIGN IN AUSTRALIA.

From Victoria, Australia, I have received copies of a report made of the conduct of the "Artisan's School of Design," Trades Hall, Melbourne, a schedule of schools of art and design, established by great effort in that colony, under the auspices of a "royal commission for promoting industrial and technological education," as well as a schedule of the studies pursued in the said schools. Of these there are fourteen in all, having a total of 1,028 scholars on their books, and receiving as aid from the commission, for the quarter ending December 30, 1870, about \$540 in gold. The Melbourne school reports 220 scholars; three others report, respectively, 104, 118, and 120.

The lowest number in attendance at any one school is 15. The competitive examination for the prizes offered by the commission includes eight classes, beginning with outlines of the human figure, continuing in ornamental, in outline and full landscape, mechanical, architectural, and geometrical drawing. Special prizes are offered for proficiency in practical geometry and drawings of working carpentry.

The second report of the Artisan's School of Design is an interesting document. It is stated that the average attendance for the year 1870 has been 154. Pupils of all trades are admitted. The course embraces classes in arithmetic, mathematics, geometry, anatomical and figure, landscape, architectural, and mechanical drawing. The object of the school, (which is noteworthy, as being founded by a trade's society,) is stated to be "the enabling of workmen and apprentices to acquire the art of drawing as applied to their daily avocations; not to train artists or draughtsmen, but to supply such knowledge and power of execution as will be of service to the pupils in making them better workmen than they would otherwise be. It is not so much intended to be a school of the fine arts, as to carry art into trade and manufacture."

#### PROPOSED CENTENNIAL EXPOSITION AT PHILADELPHIA.

The exposition proposed at Philadelphia in 1876, in connection with the centennial celebration of American Independence, has suggested to the educators of the United States the opportunity that will thus be afforded for collecting and comparing the results of the great experiments in education among us. The teachers of Pennsylvania, as well as the National Association of Educators, have already passed resolutions looking to the improvement of that opportunity for a comparison of results in our own country, and with other portions of the world that may be rep-



resented. Should the generalization of results made in this office, as reported from the different parts of the country, continue to improve in value, as there now seems to be reason to expect, a fairer representation of the condition of education in the United States may justly be anticipated than was made in the international exposition at Paris. Nothing relating to our systems of education should be purposely omitted—from the kindergarten to the university. Model buildings and apparatus showing the best mechanical appliances in the construction and furnishing of school-houses, and in the apparatus of teaching, from the toys of the kindergarten to the fixtures of the laboratory of the chemical professor and the models and material of the technical schools, should all be so exhibited as to enable those interested in educational matters from all parts of the country, and from all parts of the world, to readily examine and compare.

Text-books, maps, and charts should be collected and displayed, while teachers' institutes, normal schools, and kindergartens should be held, so that the best systems may be seen in actual operation.

It this grand opportunity is rightly improved by the educators of the country it can hardly fail to be of the greatest value. The nearest and most distant community can here reap, without the slow training of experience, the best results that the older States have been able to attain, and can avoid the countless mistakes, especially in the constructing of buildings, or in ventilating and heating apparatus, that have in so many cases wasted the means and thwarted the efforts of the most earnest workers.

The Paris exposition rudely shattered the dreams of the English manufacturers, by showing them how rapidly they were being excelled by foreign artists; the result is shown in the vast increase of English technical and artisan schools. The truth that it pays to educate workmen was very forcibly impressed upon the English mind.

It may be that some, even of our older communities, may find similar lessons of wisdom in this Philadelphia Educational Exposition, for constant watchfulness and effort is requisite to keep up the standard of teachers and schools.

The whole country is interested in securing for ourselves every excellence in the method of educating its citizens, so that they may be in no respect of preparation or training inferior to those of any country in the world. Here, where education is freest, it should also be *best*. It were unworthy of the republic were it otherwise; yet how much remains to be done before this proud boast can be made.

#### PROGRESS OF EDUCATION IN FOREIGN COUNTRIES.

The summary of education in foreign countries presented among the following papers, though brief, is full of suggestions to American educators. The civilized nations look to the profession of teaching more and more as the source and measure of their progress.

The Japanese, so long excluded from general intercourse, are seeking the best arts and methods of culture. Hundreds of their young men are in this country acquiring knowledge; increased intellectual activity is also apparent among their people at home.

Turkey, with a population of more than thirty-four millions, of exceeding great diversity of origin and antecedents in some particulars, having formally adopted a system of education, is seeking information of the exact educational condition of the people, with a view to its improvement.

Russia, with a population of over seventy-six millions, having, like America, recently accomplished emancipation, has many excellent special schools, while the Czar, and those who sympathize with him in his enlightened views, are devising measures for the education of the vast number of subjects now without a knowledge of letters and without skill in industry.

Prussia, seeking the position of mastery in central and western Europe by the success of her arms, conditioned on her educational system, does not forget this special source of her power, but shows great activity in all departments of education, though some may feel less liberty of intellectual effort than they desire, and the freedom of the teacher may be cramped and his pay inadequate.

In Austria and Italy schools are more and more relieved of the incubus of ecclesiasticism. In Austria particularly is thus to be noticed greater attention to the training of teachers, particularly of women; also greater care for the intelligence of the lower classes. Italy has accomplished much within a few years for general education, and is preparing for still more rapid progress.

France, smitten by the ignorance and superstition of her people, is showing some signs of greater appreciation of the true condition of national prosperity.

Paris, the patron of brilliant scholastics, the home of renowned authors and scientists, the seat of great schools of learning, in so many particulars the center of the intellectual activity and so long the regulator of the fashions of the world, has suffered that prevalence of ignorance among the masses of her children, and that general lack of sound moral training compatible with the growth of those conditions of want and degradation among the many, from which human nature may be expected, earlier or later, to awaken with a fury only excelled by its blindness, till, in the midst of its grasps for support, it seizes the pillars of power, and, bringing down the temple, plunges itself and others in a common ruin.

These perilous conditions were felt by not a few under the empire, but there was not good sense enough to meet them and stem the tide before the fatal catastrophe. It remains to be seen whether greater wisdom and a better fortune awaits the present experiment.

Switzerland is hardly less conspicuous for educational activity than for location. Sweden and Norway overcame the sparseness of their population and the inclemency of their climate by the general culture of their people. Portugal affords little, compared to the necessities of its people, to attract the favorable comments of the educator. Spain is in the midst of a period of great activity of thought, which, if wisely directed, would produce most excellent results. But in the educational movements of no country do Americans, as a rule, take a more lively interest than in those now in progress in England. Notwithstanding the large grants annually made to denominational schools for so many years, her pauperism and crime have increased to an extent out of all proportion to the addition to her population. The few that had planned to live only to govern the many were disappointed to find themselves by degrees compelled to feed them also.

The support of pauperism outran the efforts for education. The extension of the ballot, and the advancing conflicts of labor and capital, also admonished the good sense of their statesmen to act before too late. Endowments had failed to make uniformly good schools; the church had failed in its efforts to take the place of the state in making universal that education essential to good citizenship.

First came the endowment act, and, still later, the educational act.

No American educator can have failed to observe with profoundest interest the progress of organization under this act, of which a complete summary accompanied my last report. Many of the ablest scholars of the realm have here and there been elected to the board of education. Only partial reports from different cities have as yet reached this office, but the schools are not required to be free, and denominational schools are mixed up with the system, greatly hindering progress and limiting the satisfactory results.

Hon. George F. Hoar, of Massachusetts, who spent a considerable portion of the past summer in England, and studied particularly the various phases of education, briefly sums up the results thus far noted as follows:

1st. Henceforward there will be a good education provided at the public cost for every child in England whose parent or guardian desires he should have one.

2d. The law will "make it extremely awkward" for those parents or guardians who do not so desire.

3d. The popular vote in the various localities determines whether this education shall be wholly non-sectarian or under denominational direction—the complicated and ingenious system which brings this about I have not space to explain—and, so far, the result has been gratifyingly in favor of the non-sectarian education.

4th. University education much more liberal than formerly, both by the abolition of religious texts and immense enlargement of curriculum.

5th. Art education already admirably organized and making great progress. The means, appliances, and capacity of instruction at South Kensington are unsurpassed in the world, and a great work is also done in the provinces. Some 350,000 persons are now under instruction in art in England. This is already telling, with visible effect, on the industries of England which required taste in design, such as wall-papers, carpets, furniture, &c.

6th. Technical education in other respects not so far advanced as we should expect from the efforts made in the last few years, but public meetings are being held and earnest efforts now making which will be successful in a short time.

The London School Board, in October, adopted among its by-laws the following:

The parent of every child of not less than five years nor more than thirteen is required to cause such child to attend school, unless there shall be some reasonable excuse for non-attendance.

Upon this the London Times comments favorably.

By the courtesy of the Hon. Secretary of State, we are enabled to present in full two dispatches from Hon. Thomas H. Pearne, consul at Kingston, giving a summary of the condition of education in the island of Jamaica; all the more valuable, since Jamaica preceded us in the experiment of emancipation.

It will be noted that there is a manifest embarrassment on this island, arising from the extent to which public funds have been used for denominational purposes. The avidity with which those former slaves, or their descendants, avail themselves of any opportunities, however imperfect, offered them for education, agrees with the experiences in our own Southern States.

If the most beneficial results have not followed emancipation in Jamaica, many causes of partial failure may be found in the inadequate and inefficient efforts made for universal education. There are reported 501 schools, 36,252 scholars enrolled, with an average attendance

18,294. The aggregate income is \$105,407 82; the average amount per scholar, \$2 81. Besides the government schools, there are many denominational schools, the details concerning which will be found in the accompanying papers.

#### PROGRESS IN THE EDUCATION OF WOMAN.

Along with the agitation connected with the various interests of woman, there is a healthy increased attention to her education. An interesting paper on this subject will be found in the accompanying documents, prepared by the writer, after making extended personal observations and collating the latest information at her command. My object has been to bring the facts together, so that any one wishing information on the subject may find them accessible. Caprice cannot be trusted in the solution of a question so important. Great experiments are proceeding, and if we follow closely what they teach, I am confident great good will result, not only to women, but to society.

The question of co-education or separate education of the sexes in any or all institutions of learning is often discussed. It is hardly necessary to observe that the disposition of some minds to apply the same rule in every case bears upon its face a want of good judgment that might be expected to result in evil. There should be no attempt to infringe the privilege enjoyed in every locality and institution, of deciding these questions in its own way and according to its own measure of responsibility. We shall then be saved from any inflexible uniformity, and enjoy that diversity which the manifold interests of our communities demand.

#### EDUCATION AND LABOR.

In the last report I gave such results of the examination of the relations of education and labor as were contained in the replies then received at the Bureau. Much additional matter of value which came too late for insertion was found confirmatory of the conclusions therein reached. I have not, however, space to give these replies in detail in this report.\* I have received from many quarters in our own country most emphatic testimony of the necessity and desirableness of these inquiries, while Europe is daily bringing to view the admonitory results arising from their neglect. In England a special effort has been made to concentrate the attention of the aristocracy as well as the working men upon the solution of this question.

#### EFFECT OF THE GREAT WESTERN FIRES.

The sympathy of the country and of the world has been aroused by the terrible calamities caused by the great fire at Chicago, and by the extensive conflagrations which, sweeping over vast extents of territory, devastated large portions of Wisconsin and Michigan.

Viewed in any aspect this is appalling, but to the educator it has a meaning beyond the destruction of shelter, food, clothing, and the accumulations of wealth. To him the burning of the school-houses and the library and of museums of art and science mean the deprivation of opportunities and inspirations to the young. He sees that, as the consequence of this wholesale destruction of the appliances of education, thousands of children will be deprived of the opportunities necessary to fit them for the future responsibilities of life.

The losses connected with the destruction of the Historical Society

and its collections in some respects can never be repaired. In the libraries and collections of natural history many volumes and specimens have been undoubtedly destroyed that it will be difficult, if not impossible, to replace.

#### CONDUCT OF THE OFFICE WORK.

Since undertaking the duties of this office I have instituted suitable records of the correspondence, the library, and the expenditures of the Bureau, nothing of the kind having been previously done. The present condition of these records is unsatisfactory, because my whole clerical force would be hardly adequate for the work, even if all educational inquiry should be neglected.

More than twelve thousand educational documents have been distributed during the past year.

The correspondence of the office has so rapidly increased that repeatedly the letters received in a day have exceeded one hundred, and the communications sent several hundred in number. More than 2,000 written communications have been received and sent.

While this portion of the office work has thus grown, the inquiries and investigations respecting education in all its relations and in all parts of the country have not been neglected.

#### THE OFFICE FORCE.

The present report, though much more complete than that of last year, would have been still more satisfactory if the clerical force allowed the office by law had been somewhat more in accordance with its duties and responsibilities.

The acknowledged secret of success in all departments is the subdivision of labor; but if the work of this office in collecting and disseminating facts upon educational subjects is to be carried to its highest success, if its publications are to be as abundant, and its material as trustworthy, as full of the latest information, and as carefully prepared as the educators of the country have a right to demand, the character and number of the Commissioner's assistants should be adequate to a subdivision of the vast work in hand.

It will be noted that *more* clerical ability will not suffice here; there must be power for wise and discreet action, and great familiarity with current educational facts. A vast range of reports must be constantly in view in regard to common free schools and private schools for elementary instruction; academies, and high schools for secondary training; colleges, and every variety of professional schools for superior instruction. With the present limited number of assistants, the Commissioner must not only give his personal attention directly to an untold number of details, but each of those at work with him is under the necessity of laboring more or less in the same way.

#### THE PROPER ORGANIZATION OF THE OFFICE.

The qualifications thus rendered necessary in the clerical force of the office indicate the character also of the organization desirable for it in the future.

In addition to a sufficient number of copyists to perform the common clerical work demanded by the office, there should be a number of competent persons to take charge of special fields of labor; one at least for each

of the departments of elementary, secondary, and superior instruction; one for the charge of educational publications and reports of educational associations; another for the statistics of education; another for the charge of the library and educational documents. Being without this force, the condition of the work of the office is liable to compel any one to turn his attention to either or all of these subjects. To enable me to organize the Bureau with a view to this economical subdivision of labor will require additional appropriations, which, in view of the good results to be obtained, I most earnestly request.

#### PROPER ROOMS FOR THE OFFICE NECESSARY.

It is obvious, however, that the best clerical force attainable cannot do its utmost in rooms unsuitable for office purposes. The quarters at present occupied by the Bureau, though better adapted to its work than those previously used, are still inadequate to its needs. It should undoubtedly not only have space for all the clerical work and the library at its control, but it should be supplied with room for the reception and exhibition of specimens of improvements in educational facilities in the way of books, apparatus, and means of illustration. Here, if anywhere, either our own citizens, or foreigners visiting the country, should be able to find illustrations of the improvements which are constantly being made to facilitate the progress of education.

#### FOREIGN CORRESPONDENCE.

The correspondence of the office with foreign countries has been especially facilitated by the favor of the President and of the honorable Secretary of State and his assistants.

On the 1st of last July, I addressed, with your approval, several of our ministers to foreign courts, in transmitting copies of the last annual report of this office, substantially as follows:

I desire to attain two objects in writing to you, hoping thereby to promote education nationally and internationally:

First. I desire to establish between the two governments a system of interchange of official publications; I send this report as a beginning, and I would like to secure reports of the government to whom you are accredited in return.

Second. I desire, if possible, to secure through you an early statement of all educational action, whether national or otherwise, likely to be of use to educators in this country.

This information I hope to make useful in two ways: by the publication of such as may seem appropriate in the annual report of this office, and by occasional publications of circulars of information, specimens of which I shall send you.

I most particularly desire to secure the latest foreign statistics respecting the number of persons unable to read and write in cities and provinces, in order to compare the illiteracy of other nations with that of our own country, as developed in the forthcoming Ninth Census of the United States.

Your co-operation in these plans I shall prize highly, and hope to make the result useful among our own people, and available for use wherever there is an interest in the progress of mankind.

It is believed from letters already received\* that the results of this inquiry will be very important.

\* \* \* \* \*

#### EDUCATIONAL STATISTICS.

The work of this office in collecting and tabulating educational statistics reveals at once its great necessity to the educators of the country, and demonstrates the superiority of the facilities of a national over any local office in prosecuting these inquiries. While aiming at

final completeness, we were compelled to act upon the idea from the first that the process of growth would require time, and that we should be obliged to feel in many ways most keenly the imperfections of the results published.

Some of the advantages of efforts to collect these statistics at this point are manifest, and may be readily enumerated. First, its removal from local prejudice and excitement. Second, its treatment of education in its generalizations like other great material interests, as patents, agriculture, the Coast Survey, or even the generalizations in regard to the weather. Third, another special advantage is in the recognition of the fitness of collecting and disseminating information upon these subjects as they affect the whole country. Fourth, the free use of the Government mail, though adding an expense to its postal service. Fifth, that without the exercise of authority it brings to the minds of all educators, as they are shaping the institutions and customs of education and molding the character of future citizens, their relation to the National Government. The evils of forgetfulness in this direction we have already sufficiently experienced. Sixth, the results of inquiries from this point more than from any other are likely to put the officials of each locality into intercommunication with each other, and to bring about a recognition of their mutual relations, thus creating that sympathy between fellow-laborers to a common end which is so essential to the greatest success of the whole. Seventh, there is another special advantage which should not be overlooked. It may not always be apparent from a single case of pauperism, insanity, or crime, that education has any relation to these results as a modifying cause. Indeed a single case, or several cases in a single locality, may be an exception to the general rule; whereas, upon the collection of the facts from a vast variety of sources, such as are embraced in our entire country, great general principles may be deduced, vitally affecting every locality; and the argument once made is for use by every educator. Eighth, in respect to all educational information from foreign countries the facilities of the National Government are of course unequalled.

In order that the public mind might be fully informed of the condition of these educational statistics, and co-operate most cordially in the various measures for their improvement, we gave last year such tables as we were able to compile, although fully conscious of their incompleteness.

In no table, perhaps, is this more apparent than in that showing the attempt to collect statistics in regard to education in our cities. While the beneficial workings of the American system of public schools has been nowhere more successfully shown than in many of our large cities, yet the items of statistics reported from the different cities (school population, enrollment, average attendance, items of income and expenditure) are all so diverse, have so few points in common, that any comparison which would be entirely safe and trustworthy between the results was manifestly impossible.

Each city should furnish an example and help to every other. Each characterized by its own peculiarities and succeeding according to the measure of its own great opportunities, has, at the same time, certain conditions in common with all others; and by a recognition of these common points comparisons incalculably useful in their results could readily be made. Many attempts have been made in this direction, and much good accomplished in respect to organization, discipline, and instruction, but all have been very inadequate from want of some common standard and the lack of being able to find the results c

efforts of the different cities set down together for comparison. One of the results sought in these annual reports is to furnish such facilities. Great necessity for similar effort still remains.

The whole number of incorporated cities in the United States is over 500. Of these, 150 cities contain more than 10,000 population each. The aggregate population of these 150 cities having over 10,000 inhabitants each is 7,328,728, which is a little over 19 per cent. of 38,555,983, the total population of the States and Territories. The superintendents of schools of 116 of these 150 cities have, within the last thirty days, furnished this office the latest statistics of their respective cities, as to the number of pupils enrolled, the average attendance, the number of primary, grammar, higher, evening, corporate, or normal schools, and the income and expenditures of the public schools.

Of 112 cities, each containing over 5,000 and less than 10,000 population, 54 have sent the same class of statistics; 62 cities, containing each a population of less than 5,000 inhabitants, have also furnished the same information.

The great disparity in methods of collecting statistics by individual cities greatly impairs the value of the tables of city statistics of schools, presented in the accompanying papers, and illustrates the vast importance of the movement of the National Educational Association to secure a uniformity of city and State school statistics. Besides the 500 and more incorporated cities, there are 147 towns having over 3,000 population each.

In the national educational meetings at St. Louis, in August last, this subject came up for special consideration; and resolutions were adopted, and a committee appointed to bring it to some successful result. The demand, however, is such that the superintendent of the St. Louis schools has sent out a circular especially with a view of obtaining some harmony of effort among the different cities, and many of the city superintendents of schools in Illinois and other Western States have for some time been reporting to each other for their mutual benefit the statistics of their respective cities.

#### NORMAL SCHOOLS.

There are reported in the United States 51 normal schools, supported by 23 different States, having 251 teachers, and 6,334 pupils; 4 supported by counties, with 83 pupils; 16 city normal schools, with 112 teachers, and 2,002 pupils; all others, 43, supported in various ways, with 80 teachers and 2,503 pupils; making a total of 114 schools, with 445 teachers, and 10,922 pupils.

The idea of the importance of specially training teachers for their profession is steadily gaining ground. States that for a time suspended their normal schools have re-opened them, and even those having the largest number are disposed to increase them. So far, the literary and scientific instruction given in them has ranked below that of the college, or as secondary; and the normal training has been adapted to prepare teachers chiefly for their duties as instructors in high schools, academies, and schools for elementary training, the training of teachers for instruction in colleges and professional schools receiving little or no attention in our institutions of learning. Indeed there has been in superior instruction a sort of license for inferior methods, that would not be tolerated in a system of well-managed public schools. It is gratifying to observe among the ablest managers of these institutions of higher learning a disposition to correct this evil, and not to allow excellence



of method and manner to be excluded from the recitation or lecture room of the college or professional school. President Porter has already intimated his purpose to associate a training school with the exercises of Yale College.

#### BUSINESS COLLEGES.

The business colleges reported are 84 in number, scattered through 27 States, having 168 instructors and 6,460 pupils. It will be observed that the public demand for this kind of instruction is very largely met by institutions entirely outside of public control. In some instances they are believed, by gentlemen of excellent judgment, to be purely business speculations. If any community suffers in this way it can censure only itself. What these institutions propose to do is specially demanded in the preparation of the young for the business relations of life, and should be provided in every system of city schools. If many who demand the instruction cannot attend during the hours of the day, the opportunity should be furnished in the evening; but where this necessity is not met by public provision, great credit should be given to those private enterprises which furnish able commercial lectures and thorough training.

#### INSTITUTIONS FOR SECONDARY INSTRUCTION.

The progress toward completeness exhibited in this report enables us to present a partial illustration of the great subdivisions of instruction so often recognized among educators; as, 1st. Superior; 2d. Secondary; 3d. Elementary. In the last report the statistics of institutions for superior instruction only were included. In addition, this report contains the statistics of 638 academies and high schools—institutions of secondary instruction.

The fullness of the details collected by the office will be seen by comparing those against which the entire series of columns is filled, and those in which several of the columns are blank, as the latter are taken from the reports of the regents of New York and of the State officers of instruction. The value of these inquiries to educators, when carried to their conclusions, can hardly be overestimated. Silently each institution, by its own choice or by the public judgment, takes its place in its appropriate class and grade. The public mind comes by degrees to a clear apprehension of what is included in the respective subdivisions of education, and whatever name an institution may assume does not alter the judgment of the value to be set upon it.

#### COLLEGES.

In the table of colleges and collegiate departments chartered to confer degrees in arts, of the 368 reported there are—

In Alabama.....	9	In Maryland.....	11	In Rhode Island.....	1
In Arkansas.....	2	In Massachusetts....	6	In South Carolina....	6
In California.....	20	In Michigan.....	8	In Tennessee.....	17
In Colorado Territory..	1	In Minnesota.....	3	In Texas.....	8
In Connecticut.....	3	In Mississippi.....	10	In Vermont.....	3
In Delaware.....	2	In Missouri.....	21	In Virginia.....	10
In Georgia.....	8	In Nebraska.....	2	In West Virginia.....	4
In Illinois.....	28	In New Hampshire....	1	In Wisconsin.....	13
In Indiana.....	20	In New Jersey.....	4	In District of Colum-	
In Iowa.....	15	In New York.....	25	bia.....	4
In Kansas.....	7	In North Carolina....	7	In New Mexico.....	1
In Kentucky.....	8	In Ohio.....	33	In Utah Territory.....	1
In Louisiana.....	10	In Oregon.....	6	In Washington Terr-	
In Maine.....	3	In Pennsylvania.....	29	itory.....	1

Of these 368 colleges 28 are under the supervision of States, 1 of a city, and 1 of the Masonic fraternity; supervisory power over 77 is undetermined. The remaining 261 are divided among the denominations as follows:

Methodist Episcopal .....	35	Congregational .....	19
Methodist Episcopal, South .....	8	Christian .....	8
Methodist .....	6	Lutheran .....	16
African Methodist Episcopal .....	1	Friends .....	4
Methodist Protestant .....	2	United Brethren .....	4
Presbyterian .....	25	Universalist .....	5
United Presbyterian .....	4	Unitarian .....	2
Cumberland Presbyterian .....	2	Moravian .....	1
Congregational and Presbyterian .....	1	New Church .....	1
Protestant Episcopal .....	16	German Reformed .....	3
Baptist .....	38	Dutch Reformed .....	3
Free Baptist .....	1	Latter-Day Saints .....	1
Roman Catholic .....	54	Evangelical Association .....	1

As far as is known, there are in these institutions 2,962 instructors and 49,827 pupils. One hundred and fifty-eight colleges instruct males only; 99 admit both males and females; and of 111 the sex of the students is not specified, but is probably male.

#### FEMALE COLLEGES.

I have thrown into a supplement to this table the statistics collected respecting 136 institutions for the superior instruction of females exclusively.

Of these there are—

In Alabama .....	7	In New Hampshire .....	2
In California .....	3	In New Jersey .....	2
In Connecticut .....	4	In New York .....	11
In Delaware .....	1	In North Carolina .....	9
In Georgia .....	17	In Ohio .....	13
In Illinois .....	8	In Oregon .....	1
In Indiana .....	2	In Pennsylvania .....	12
In Kansas .....	1	In South Carolina .....	1
In Kentucky .....	4	In Tennessee .....	7
In Maryland .....	4	In Texas .....	1
In Massachusetts .....	4	In Vermont .....	1
In Michigan .....	2	In Virginia .....	5
In Minnesota .....	1	In West Virginia .....	2
In Mississippi .....	5	In Wisconsin .....	2
In Missouri .....	4		

Of these 136 female colleges, 2 are under the supervision of the Masonic fraternity, and the supervisory power of 65 is undetermined. The remaining 69 are divided among the denominations as follows:

Methodist Episcopal .....	15	Roman Catholic .....	6
Methodist Episcopal, South .....	1	Congregational .....	6
Presbyterian .....	13	Lutheran .....	2
Cumberland Presbyterian .....	1	United Brethren .....	2
Protestant Episcopal .....	7	Moravian .....	3
Baptist .....	12	German Reformed .....	1

As far as is known, there are in these female colleges 1,163 instructors and 12,841 pupils. How many of these institutions are chartered to confer degrees is not known.

From the above statement it will be seen that in the 504 institutions above mentioned there are 4,125 instructors and 62,668 pupils.

No such extended statistics have, it is believed, ever been compiled or published in this country.

Statistics of the professional schools connected with these institutions will be found in the appropriate tables—law, medical, theological, &c.

#### THEOLOGICAL SEMINARIES.

The table showing theological instruction in the country gives the total number of institutions as 117. Of these, Alabama has 2; California, 3; Connecticut, 3; Georgia, 1; Illinois, 11; Indiana, 1; Iowa, 5; Kentucky, 7; Louisiana, 2; Maine, 2; Maryland, 3; Massachusetts, 7; Michigan, 2; Missouri, 4; New Jersey, 3; New York, 12; North Carolina, 1; Ohio, 13; Pennsylvania, 17; South Carolina, 3; Tennessee, 2; Texas, 1; Virginia, 5; West Virginia, 1; Wisconsin, 4; District of Columbia, 2.

These seminaries are distributed denominationally, as shown by the following table, which also gives the number of professors or instructors and students.

Denomination.	Number of seminaries.	Number of instructors.	Number of students.
Roman Catholic .....	17	72	462
Presbyterian .....	14	50	544
Baptist .....	17	37	309
Methodist Episcopal .....	10	30	252
Congregational .....	7	35	276
Protestant Episcopal .....	12	46	224
Lutheran .....	14	30	123
Christian .....	2	2	106
Reformed .....	2	12	41
Free-Will Baptist .....	2	8	53
Unitarian .....	2	8	47
United Presbyterian .....	4	8	42
Unitarian .....	1	6	21
Moravian .....	1	4	20
African Methodist Episcopal .....	1	2	12
Union Evangelical .....	1	5	12
New Jerusalem .....	1	4	8
United Brethren .....	1	1	7
Unknown .....	6	11	43
<b>Total .....</b>	<b>117</b>	<b>369</b>	<b>3,304</b>

#### LAW SCHOOLS.

There are forty law schools in the United States, with one hundred and twenty nine professors, and 1,722 students. Of the States having more than one, Illinois, Iowa, and Tennessee have each two; Indiana, Ohio, and Virginia have three each; Pennsylvania and the District of Columbia four, and New York five. Seventeen States have no law schools, namely: Alabama, Arkansas, California, Delaware, Florida, Kansas, Maine, Maryland, Minnesota, Nebraska, Nevada, New Hampshire, New Jersey, Oregon, Rhode Island, Vermont, and West Virginia; while Connecticut, Georgia, Louisiana, Kentucky, Massachusetts, Michigan, Mississippi, Missouri, North Carolina, South Carolina, Texas, and Wisconsin have one each.

#### MEDICAL SCHOOLS.

The table of medical schools indicates fifty-seven known as regular, four as eclectic, two as botanic, six as homeopathic, nine as dental, and sixteen as pharmaceutical; total, ninety-four. Of those denominated regular, Alabama, Connecticut, Indiana, Louisiana, Maine, New Hampshire, Oregon, Texas, and Vermont have each one; Cali-

fornia, Iowa, Kentucky, Maryland, Massachusetts, Michigan, South Carolina, Tennessee, and Virginia, two; Georgia, Illinois, and the District of Columbia, three; Missouri and Pennsylvania, four; Ohio, five; and New York eight. Of the other classes Ohio has seven, New York and Pennsylvania each five.

## LIBRARIES.

Public libraries are at once an important means and a valuable index of education. The following summary, drawn from the table in the Appendix to this report, showing their distribution in the States, will not be without value and interest. Year by year this office should be able to present the growth of this valuable auxiliary to all forms of culture.

States.	Number of libraries.	Number of volumes.	States.	Number of libraries.	Number of volumes.
California .....	4	28,288	Nebraska .....	1	10,280
Connecticut .....	13	66,280	New Hampshire.....	9	46,694
Delaware .....	2	36,000	New Jersey .....	6	11,700
Georgia .....	1	3,000	New York .....	16	548,004
Illinois* .....	6	197,600	Ohio .....	7	123,846
Indiana .....	5	19,580	Pennsylvania .....	19	181,578
Iowa .....	2	14,000	Rhode Island .....	13	65,437
Kansas .....	1	600	South Carolina .....	2	17,000
Kentucky .....	4	7,148	Vermont .....	2	14,663
Louisiana .....	1	1,000	Virginia .....	2	28,406
Maine .....	10	61,394	West Virginia .....	2	4,700
Maryland .....	4	55,436	Wisconsin .....	1	50,500
Massachusetts .....	20	476,138	District of Columbia .....	7	280,923
Michigan .....	5	47,202	Washington Territory.....	1	2,309
Minnesota .....	2	18,500			
Mississippi .....	1		United States .....	180	2,355,237
Missouri .....	2	7,000			

\* One library, containing 112,000 volumes, reported here, was burned in the Chicago fire.

It is manifest that much more can be done than has been, to utilize the libraries collected, and that this would also facilitate their increase. I would call special attention to the effort of Hon. Wm. T. Harris, the able superintendent of public instruction of the city of St. Louis, to render more useful the public-school libraries of that city, by his essay on the system of classification, published in the catalogue of that library

## BENEFACCTIONS TO EDUCATIONAL OBJECTS.

An attempt has been made during the year to collect the statistics of the number and amount of the gifts of individuals throughout the country in aid of education. Although the record attempted by this Bureau is doubtless far from complete, still the results, as shown by the table in the Appendix, which gives the facts in detail, are most surprising and gratifying, summing up a total of more than eight million dollars.

It is believed that these unsolicited contributions by private citizens for the educational interests of the community, are at the present time without a parallel in any other country of the world. Wealth thus recognizes its responsibility and indicates its wisdom, for the education of her children is at once the duty and the safety of the commonwealth.

It will be seen that in California these gifts amount to \$2,000,000; in Connecticut to \$845,665, of which Yale College receives \$319,863; in Georgia, \$1,000; in Indiana, \$537,025; in Illinois, \$301,000; in Iowa,

\$75,000; in Kansas, \$50,000; in Louisiana, \$1,000; in Massachusetts, \$2,502,000, of which Harvard College receives \$400,000; in Minnesota, \$50,550; in Missouri, \$205,000, entirely for Washington University, St. Louis; in Michigan, \$15,000; in New Hampshire, \$168,000, of which Dartmouth College receives \$121,000; in New Jersey, \$323,500, of which Princeton College receives \$223,500; in New York, \$765,000; in Ohio, \$23,250; in Oregon, \$5,000; in Pennsylvania, \$312,000; in Rhode Island, \$24,000; in South Carolina, \$13,000; in Tennessee, \$4,000; in Virginia, \$45,000; in Wisconsin, \$80,000; making a total of \$8,435,000.

Of these individual donations two were of \$1,000,000 or over; twenty-three were of \$100,000 and over; fifteen of \$50,000 and over; eleven of \$25,000 and over; twenty of \$10,000 and over; and thirty three of \$1,000 and over.

In the following States no individual benefactions amounting to \$1,000 were reported: Alabama, Arkansas, Delaware, Florida, Kentucky, Maine, Maryland, Nebraska, Nevada, North Carolina, Texas, and West Virginia.

#### AMERICAN EFFORTS IN AID OF EDUCATION IN OTHER LANDS.

China and Japan\* each maintain an institution presided over by an American educator. American teachers and American merchants may be found in every land. The school system and the civilization of the Sandwich Islands are entirely the outgrowth of the efforts of our citizens. Oahu College at Punaloa, which has been endowed by the government of these islands, is presided over by an American.

Robert College, at Constantinople, as well as its noble founder, C. R. Robert, esq., of New York City, has already received the cordial recognition of the Sultan. This institution, which is presided over by Dr. Hamlin, has now nearly 100 students, and graduated its first class of five in July, 1870. In Turkey there are four theological schools, with 78 students; seven boarding-schools for girls, with 151 pupils; and 185 common schools, with 5,679 scholars, under the direction of an American association; and in Syria there is a theological school, and two girls' boarding-schools, with 95 pupils. Details in regard to these and other interesting efforts in behalf of education abroad, will be found in the abstract of foreign educational intelligence in the accompanying papers.

#### THE LITERATURE OF EDUCATION.

The table respecting the publication of city reports on education exhibits one series of facts related to the literature of education.

The table of educational publications, as far as reported, shows the activity in this department of educational work. Twenty-six publishing houses report the issue of 101 volumes, which would average 207 pages per volume.

#### COST OF EDUCATION.

At the special solicitation of educators, the statistics contained in Table XXI in regard to the cost of education in the different States of the Union, and in Table XXII as to the cost of education in the public schools of many of the different cities of the Union, were obtained, and the results are presented, as an indication of the present incompleteness and unsatisfactory nature of this class of comparisons, as based upon present accessible statistics, with the hope that philosoph-

\* Yet we are informed that in Japan the Mikado is learning the German, and not the English language.

ical educators may be stimulated to a revision of the records and reports of these facts, from which the elements necessary to make such an investigation of the highest value must be derived.

#### SCHOOL EXPENDITURES AND VALUES OF PROPERTY.

Space and time will not permit me to enter into those comparisons of the States with each other which can be made from the material supplied in the tables above referred to. I, however, call attention to the following:

*Graduated table, showing for each State of the Union the public-school expenditure per capita of the school population, and the assessed valuation of property per capita of the total population.*

Number.	States.	Public-school expenditure per capita of school population.	Assessed valuation of property per capita of total population.	Number.	States.	Public-school expenditure per capita of school population.	Assessed valuation of property per capita of total population.
1	Massachusetts .....	\$20 66+	\$979 39	21	Arkansas .....	\$3 53+	\$194 38
2	Nevada .....	*19 17+	605 79	22	Louisiana .....	3 17+	349 93
3	Connecticut .....	12 92+	600 15	23	Mississippi .....	2 95+	214 10
4	Rhode Island .....	11 89+	982 59	24	West Virginia .....	2 84+	317 97
5	California .....	*11 44+	481 29	25	Delaware .....	*2 70+	518 23
6	New Jersey .....	8 89+	629 62	26	Missouri .....	*2 65+	323 08
7	Nebraska .....	8 06+	460 06	27	Oregon .....	2 06+	349 73
8	Pennsylvania .....	*7 86+	353 04	28	Alabama .....	*1 49+	157 24
9	Michigan .....	7 33+	229 92	29	Florida .....	*91+	173 00
10	Iowa .....	7 10+	253 91	30	Tennessee .....	*91+	292 35
11	New York .....	6 89+	448 80	31	Illinois .....	80+	190 13
12	Ohio .....	6 86+	438 13	32	Kentucky .....	*60+	310 62
13	Kansas .....	*6 45+	252 80	33	North Carolina .....	*48+	121 69
14	Vermont .....	6 09+	310 23	34	Georgia .....	.....	191 00
15	Indiana .....	5 15+	394 75	35	South Carolina .....	.....	260 64
16	Wisconsin .....	4 86+	316 16	36	Texas .....	.....	182 92
17	Minnesota .....	4 85+	191 36	37	Virginia .....	.....	226 27
18	Maryland .....	4 73+	542 76				
19	New Hampshire .....	*4 46+	468 31				
20	Maine .....	4 06+	357 71		United States .....	.....	358 08

\* From the report of this Bureau for 1870.

#### EDUCATION AND PAUPERISM.

The results of the inquiry instituted by this office respecting the relations of education to pauperism have not progressed far enough to call for present publication. The statistics received from nine establishments (State or county) for the support of paupers show the total number of adults to be 1,375; minors, 987; total, 2,362. Of these, 959 were unable to read and write, and 34 only had received a superior education. The number of native-born was 1,157; of foreign birth, 1,002. The total expense for the year was \$216,575 56. Among the conditions of admission to these establishments are orphanage, destitution, vagrancy, and truancy.

#### CENSUS STATISTICS.

Table I in the Appendix has been derived from advance tables of the census of 1870. The area of the States in square miles was kindly supplied by Hon. Willis Drummond, Commissioner of the General Land Office.

## PARENTAGE OF THE POPULATION.

The two columns showing "both parents native," and with "one parent only foreign," are deductions from the statistics of the census, and are interesting as showing the proportion of inhabitants in whose families native, or partially native, influences prevail. If the most important steps of education are taken during the earlier years of life, it is necessary for American instructors to know of what character that education for our population is to be. Countless prejudices, bigotries, modifications of temperament, and consequent difficulties in school government, find here their cause, and the educator is obliged to make perpetual allowance for them. But this is not the only lesson which our new census has for us.

## STATISTICS OF ILLITERACY, 1870.

Former decennial censuses are very far inferior to this one in the statistics of illiteracy presented. The census of 1840 furnished only the number of white persons over 20 years of age unable to read and write, making no further distinctions of nativity, race, or sex. The censuses of 1850 and 1860 reported the number, nativity, race, and sex, of the free illiterate over 20 years of age, but failed to give any direct information respecting the intelligence of the minor population.

The census of 1870 shows its superiority in this particular. The number of persons whose illiteracy has been reported comprehends all 10 years old and over. As many persons will readily acknowledge their inability to write who will not confess that they cannot read, and as the ability to write is a very useful indication of the extent to which it is possible to use the knowledge of reading, the whole number of persons 10 years old and over unable to read (and therefore not able to write) is given separately; and the value of the census is further greatly increased by the amount of labor bestowed in showing the age, race, and sex of all those unable to write who were 10 years old and over. These are really the illiterates of the country, and never before has there been so searching, skillful, and complete an exhibition of the facts concerning them.

This office was only able to give to the public the first summary of these deductions from the census of 1860, after the close of the decade. Now, only a little over a year after the schedules from the assistant marshals were placed in the hands of the Superintendent of the Census for 1870, he has furnished the data from which this office has prepared the following suggestive tables, for the use of the educators of the country, before the second year of the decade has passed.

## NATIVITY OF ILLITERATES IN 1870.

In connection with the subject of parentage, the nativity of the illiterate population is an interesting inquiry, and the following table is presented.

As only general causes of illiteracy will be mentioned in this connection, the States and Territories have been grouped in three geographical positions, designated as Northern, Pacific, and Southern. The first comprises all the present States in which slavery did not exist in 1860, except the three on the Pacific Slope; the second includes the three Pacific States and all the Territories enumerated in the census, except the District of Columbia; the third comprises the rest of the States and the District.

It will be observed that persons of foreign birth furnish nearly one-half the illiteracy of the Northern division, more than one-half of that

in the Pacific division, about one fifty-seventh part of that in the Southern division, and more than one-seventh of that of the whole country.

*Table, derived from advance sheets of the Ninth Census, showing the number of native and foreign illiterate persons ten years old and over, of all races, in the States and Territories, arranged in divisions.*

States and Territories.	Number of illiterates.		
	Native.	Foreign.	Total.
Grand aggregate, United States.....	4,882,210	777,864	5,660,074
Aggregate, Northern division .....	690,117	665,985	1,356,102
Maine.....	7,986	11,066	19,052
New Hampshire.....	1,992	7,934	9,926
Vermont.....	3,902	13,804	17,706
Massachusetts.....	7,919	89,830	97,749
Rhode Island.....	4,444	17,477	21,921
Connecticut.....	5,678	23,938	29,616
New York.....	72,583	168,509	241,152
New Jersey.....	29,726	24,961	54,687
Pennsylvania.....	126,803	95,553	222,356
Ohio.....	134,102	39,070	173,172
Michigan.....	22,547	30,580	53,127
Indiana.....	113,185	13,839	127,194
Wisconsin.....	14,113	41,328	55,441
Illinois.....	90,605	42,979	133,584
Minnesota.....	5,558	18,655	24,213
Iowa.....	24,980	20,692	45,672
Nebraska.....	3,552	1,309	4,861
Kansas.....	20,449	4,101	24,550
Aggregate, Pacific division.....	74,504	39,496	114,000
California.....	9,520	22,196	31,716
Oregon.....	3,003	1,424	4,427
Nevada.....	98	774	872
Arizona Territory.....	262	2,491	2,753
Washington Territory.....	852	503	1,355
Idaho Territory.....	138	3,250	3,388
Utah Territory.....	3,334	4,029	7,363
Montana Territory.....	394	524	918
Dakota Territory.....	758	805	1,563
Wyoming Territory.....	266	336	602
Colorado Territory.....	6,568	255	6,823
New Mexico Territory.....	49,311	2,909	52,220
Aggregate, Southern division.....	4,117,589	72,383	4,190,972
Delaware.....	20,631	2,469	23,100
Maryland.....	126,907	8,592	135,499
District of Columbia.....	26,501	2,218	28,719
Virginia.....	444,623	1,970	446,593
West Virginia.....	78,329	3,101	81,430
Kentucky.....	324,945	7,231	332,176
North Carolina.....	397,573	117	397,690
Tennessee.....	362,955	1,742	364,697
South Carolina.....	289,728	653	290,379
Georgia.....	467,503	1,090	468,593
Alabama.....	382,142	870	383,012
Florida.....	71,235	568	71,803
Mississippi.....	312,483	827	313,310
Missouri.....	206,627	15,584	222,211
Arkansas.....	133,042	297	133,339
Louisiana.....	268,773	7,385	276,158
Texas.....	203,334	18,369	221,703

#### RACES AND RACE-PREJUDICE.

From the statistics of "Race" in Table I of the Appendix, the following table, showing the relative proportion of the races, is derived. Of every 10,000 inhabitants there are—

	White.	Colored.	Chinese.	Indian.
In the States.....	8,711	1,209	15	5
In the Territories.....	8,711	1,017	158	114
In the whole Union.....	8,711	1,266	16	7



The curious fact is here shown that the white race bears generally a constant and overpowering relation to all the others. The duties of this highly-gifted numerical majority, this practical totality of intellectual and moral force toward the rest of the population, should, it seems, consist in the exercise of justice and kindness, the supply of equal facilities for their education and improvement, and the protection of their rights of person and property by every safeguard of usage and law.

But the actual state of things is precisely the reverse. There is probably no greater obstacle to universal education than this race-prejudice. It is not satisfied with ordinary manifestations, but records itself in the enactment of prohibitory laws. In its eagerness to wound others the white race of our country has injured itself. The ignorance to which it once sought to doom the negro and the Indian, and in which it would fain now try to keep the Chinese, riots in our own midst and strikes at the permanence of our most cherished institutions.

As safely may one race exclude another from the benefits of medicine or the application of sanitary laws. No city would think of tolerating the small-pox in any class of its citizens even though that class were of another race; for it has been so terribly written that this physical scourge in its deadly unity oversteps all boundaries of race, that the dullest, most bigoted, and stupidest of communities realizes perfectly that its only hope of immunity depends on the protection of each individual, and every class composing it.

But, what bodily disease has ever wrought the terrible evils to society that come from that ignorance whose children are destitution and crime? The despised, neglected, destitute, and ignorant have, in past times, more than once destroyed governments, and may do so again. The children whom society, the church, and the school fail to educate, learn in the streets, and from countless teachers of vice, aided by those grim masters, hunger and want, the malign arts that render the property of our households, the virtue of our women, and the health and happiness of our people insecure.

And from the brief table just given it will be seen that this race-prejudice is exercised by five people out of every six toward one.

It is true that this reproach of injustice does not apply equally to every State and community; but in those parts of our country where individuals of these proscribed races are most numerous, and where consequently the danger of allowing them to remain in mental darkness is most imminent, the prejudice against their improvement is (for many natural and some unjustifiable reasons) most difficult to overcome. The number of persons of the white and colored races in the Southern States will be found in one of the tables of the Appendix to this report. From the statistics there given it appears that the excess of the white race over the colored is, in—

	Majority.		Majority.
Alabama.....	45, 874	Missouri.....	1, 485, 075
Arkansas.....	239, 946	North Carolina.....	286, 820
Delaware.....	79, 427	Tennessee.....	613, 788
Florida.....	4, 368	Texas.....	311, 225
Georgia.....	93, 774	Virginia.....	199, 248
Kentucky.....	876, 442	West Virginia.....	406, 043
Maryland.....	430, 106		

and that the colored race is in excess in only three States, having over the white in—

	Majority.		Majority.
Louisiana.....	2, 145	Mississippi.....	61, 305
South Carolina.....	126, 147		

leaving the whites of these sixteen States in a majority of 4,882,539 over

the colored. That is to say, there are more than two whites to every negro in the Southern States as a whole. While this white preponderance, therefore, is powerful enough to assert itself over the co-resident negroes, the proportion of colored people is so great as to render their education in mind and morals and their training for the duties of citizenship and the responsibilities of life a matter of the greatest importance to their white fellow-citizens, for nothing is more certain than the tendency of a partial injustice, a partial error, a partial short-coming to become universal. The measure which we mete out to others is measured out to ourselves; pleasant as it may be for one class, priding itself upon its race superiority, to deny education to another, nature as truly exacts penalties of the State as of the individual, and finds ways "out of our pleasant vices" to frame "the instruments that plague us." If one race, as a race, is kept in ignorance, the instrumentalities for its repression and the hinderances to its improvement gradually but inexorably apply themselves to the rest of the community, and the ignorance which began by being the ordained and legal condition of the negro becomes at last the heritage of the white also, and the common curse of the whole State.

#### RACE ILLITERACY.

It will be observed also that the white illiterates of the United States outnumber those of all other races. In the Northern division, out of every fourteen illiterates thirteen are white. In the Pacific division, out of every twenty-three illiterates, twenty are white; in the Southern division, out of every forty-two illiterates fifteen are white.

These statistics, it will be observed, show nothing but the differences of race, and give no clue to the relative proportions of illiteracy in the different sections to their whole population. Those facts will be found in the other tables.

#### THE ILLITERACY OF SEX.

There are also interesting statistics bearing on the relative instruction and the illiteracy of the sexes.

In our own country the public-school system, in many of the States reaching every village and neighborhood, is the great instrumentality in producing the equal education of the sexes. Here the feudal and monastic notions respecting the inferior importance of female education have had little influence and are rapidly disappearing. To no man who reflects can the education of women be a matter of indifference; for on the character, intelligence, and cultivation of the mother depend, to an incredible extent, the early instruction, the future habits, and the mental tone of her children; to her the world looks for the grace of manner, the purity of purpose and of life, the sympathy of heart, and the rectitude of moral sense in which her sex, her tastes, and her disposition enable her to excel the opposite sex.

When women are coarse, or ignorant, or impure, the society they are members of, the race they belong to, the community they live in, and the men around them will infallibly degenerate.

The Chinese and Indian illiterates, not being divided as to sex, are omitted from the following table. In the Northern division the female illiteracy is fifty-eight per cent., in the Pacific division fifty per cent., and in the Southern division about fifty-two per cent. of the total illiteracy.

## SEX ILLITERACY OF ENGLAND, 1841-1869.

There has not been time, since these statistics from the census officials were obtained, to undertake, with the small force at my command, such a comparison with the statistics contained in the census of previous years, and in those of foreign countries, as might be profitable and interesting. The following extracts and table are, however, taken from the thirty-second annual report of the registrar general of England for the year 1869, as furnishing a standard of comparison:

"Thirty-five thousand one hundred and ninety-nine men and forty-eight thousand seven hundred and fifty-eight women made marks in signing the marriage register in the year 1869. Of 100 men married, 20, and of 100 women 28, did not sign their names. The returns continue to afford proofs of slow improvement in the elementary education of the people in the year under review: out of every 100 persons married 17 were able to write their names in excess of the number in 1841, 28 years previously. The improvement has been greater in women than in men. In 1841, in 100 marriages the proportion of men and women who signed by mark was 33 and 49, respectively, and in 1869 it was 20 and 28."

## ADULT AND MINOR ILLITERACY, 1870.

Whether the illiteracy shown by the preceding tables has passed beyond the control of the state, the family, and the school—whether it has become voter, citizen, parent—are questions of grave import.

## RACE AND AGE OF THE MINOR ILLITERACY, 1871.

But even these tremendous figures do not show the extent of this threatening evil, for the measure of future adult illiteracy is found in the present record of the number of children growing up without a knowledge of the rudiments of learning.

Were an invading hostile army to threaten our frontiers, the whole people would rise in arms to repel them; but these tables show the mustering of the hosts of a deadlier foe, a more relentless enemy, already within our own borders and by our very firesides: a great army of ignorance, growing ever stronger, denser, and more invincible.

History shows us how slow and painful are the steps by which a people advance to civilization; how easily, suddenly, and completely these slow conquests may be wrested from them. Athens sank rapidly, till its transcendent fame became only a dim tradition. Hostile barbarians plunged Rome into a long night of ignorance.

Ten years without schools for children will insure an adult generation of ignorant citizens, who in losing the knowledge of, will also have lost the desire for, letters. What this danger to our own country is, and where it is to be found, is thus shown: Of the 2,000,000 ignorant persons between 10 and 21 years old, nearly 1,700,000 are in the Southern division; and, as we have already seen, the Southern illiteracy is almost entirely native born.

The following table gives the race and age of the minors between ten and twenty-one years old. The number between fifteen and twenty-one, who have probably outgrown much chance for instruction, is, in the Northern division, about 137,000; in the Pacific division, about 15,000; and in the Southern division, about 778,000; or, in the whole country, nearly 930,000; of the 505,000 colored youth between fifteen and twenty-

one in the United States, about 494,000 are in the Southern division, and nearly 284,000 of the whites of the same age will be found in the same section. The survivors of these 930,000 boys and girls will all, within the next five years, be reckoned among the "adult" illiterate host of the country.

Of the 1,076,600 between ten and fifteen years old, 139,200 are in the Northern division; 17,000 in the Pacific, and 920,400 in the Southern; 7,600 of those in the Northern division, 100 in the Pacific, and 485,600 in the Southern are colored.

For the illiteracy of these 1,076,600 there can be very little satisfactory excuse. They are not too old for control, or too young for study. If neglected, they will form the illiterate adults of the next generation of American citizens, and will carry into future years for the woe of the nation the results of the idleness, mental torpor, and gross ideas which now surround them.

For the unintelligent child or youth, the educator may have good hope of future culture and knowledge, but very little for those who have become men and women. The following statistics show the number who have probably passed beyond all opportunity of instruction, without being able to write, and the number for the greater part of whom there may yet be some possible educational training.

In the Northern division more than 79 per cent., in the Pacific division more than 68 per cent., and in the Southern division more than 59 per cent. of the illiterate are adults. There are more than twice as many adult, and more than four times as many minor illiterate persons in the Southern division than in all the rest of the country. Nearly 1,700,000 persons from 10 years old to 21 years old in the Southern States are without knowledge of the merest rudiments of education.

\* \* \* \* \*

#### RACE AND SEX OF THE ADULT ILLITERACY.

It will be seen that there are in this country about 1,585,000 illiterate male adults, of whom about 743,000 are whites; that in the Northern division there are about 395,000 white and 34,000 colored, in the Pacific division about 35,000 white and 750 colored, and in the Southern division about 313,000 white and 807,000 colored males, who cannot write, and yet who are or may become voters.

There are, of white female adults, (21 years old and over,) unable to write, about 610,000 in the Northern division, about 34,000 in the Pacific division, and about 484,000 in the Southern division. The colored female adult illiterates number about 38,000 in the Northern division, 500 in the Pacific, and 885,000 in the Southern. There are, therefore, in the whole country 2,052,000 ignorant women, most of whom are or may become mothers of children and trainers of families.

While every preceding census has shown, and the forthcoming one will probably also show, that the males preponderate, there are actually nearly 467,000 more ignorant women than ignorant men in the United States; of this majority 219,000 are in the Northern division, and of these about 215,000 are white women.

\* \* \* \* \*

#### HOMICIDES, 1869-'70.

Of the 2,047 homicides reported, 417 were in the Northern division, 269 in the Pacific, and 1,361 in the Southern. The Indians perpetrated 11 of those in the first division, and 74 of those in the second. Even

if it be merely a coincidence that ignorance and homicides go hand in hand, it is a curious one.

#### RATIOS OF ILLITERACY, 1870.

If the work on the census had progressed sufficiently to have furnished the statistics of the age and sex of the population in the United States, the comparison between the illiteracy of the different divisions and of this census with its predecessors would not have to be deferred, as it must be for the present.

In order to gather up the statistics presented in one view, the following table has been calculated in this office. It will be seen that, in *proportion to the total population* of the respective divisions, the total illiteracy of the Northern is about one-half of that of the Pacific, and less than one-fifth of that of the Southern; that the native illiteracy of the Northern division is less than one-tenth of that of the Southern; that the white illiteracy of the Northern is less than one-half of that of the Southern; that the colored illiteracy of the Northern is about one forty-eighth part of that in the Southern; and that in the Southern division the adult male illiteracy is nearly four and one-half times, and the total minor illiteracy more than ten times, as great as that in the Northern division.

#### Ratio of illiteracy, 1870.

Of the total population	In every 1,000 persons—		There were illiterate—										
	Of all races						Of the white and colored races only						
	Of the—												
	Total	Native born	Foreign born	White	Colored	Chinese and Indian	Total	Male	Female	Total	Male	Female	Our female to every
1850-1870 Northern division	17	29	29	51	4	90	52	34	31	45	18	25	126,000
1850-1870 Pacific division	113	74	39	100	1	12	101	51	50	50	36	34	24,000
1850-1870 Southern division	229	294	5	108	191	7	294	142	152	152	50	97	10,000
1850-1870 United States	146	126	20	74	71	90	146	67	79	94	41	51	129,000

\* Inappreciable.

; Including murders by Indians.

#### Statistics of foreign illiteracy from European sources.

##### ILLITERACY OF RECRUITS.

The percentage of illiteracy among recruits was, in Belgium, 49; Germany—Anhalt, 1.53; Bavaria, 2; Prussia, 3.57, in 1869-70; 3.94, in 1868-69.

##### ATTENDANCE AT SCHOOL.

Out of every 100 children between the ages of six and thirteen, there attended school, in Saxony, Prussia, and Württemberg, 96 to 99; Switzerland, 95 to 96; Bavaria and Denmark, 89; France, 78; Sweden, 97; Netherlands, Belgium, and England, 75 to 77; Mecklenburg, 64; Austria, 51; Spain, 46; Italy and Poland, 35; Greece, 29; Portugal, 14; Turkey, 11; Russia, 6.

## SOME GENERAL FACTS WITH REGARD TO ILLITERACY IN EUROPEAN COUNTRIES.

*Austria.*—Hungary: City of Szegedin, population, 70,000; number unable to read and write, 48,000.

*Russia.*—In Archangel, only 1 out of every 1,166 of the population can read and write.

*Belgium.*—In the town of Roulers, out of 13,774 inhabitants 9,849 could neither read nor write. In the factory districts of Belgium, out of 1,000 workmen only 100 could read and write; of the rest, 50 only could read.

*France.*—Out of 130 French officers prisoners of war at Königsberg, Prussia, 17 could not even write their names.

## STATISTICS FROM OTHER SOURCES.

The result of an investigation made in the office in regard to the relation of postal and revenue receipts and the number of patents issued, to the illiteracy in different sections of the country, presents considerations not to be overlooked.

The number of patents issued to the inhabitants of Arkansas was one to every 37,267 persons, while in Connecticut there was one patent issued to every 966 persons. In Arkansas there are sixteen adults unable to write to every one hundred inhabitants; in Connecticut there are four adults unable to write to every one hundred inhabitants. In Arkansas the receipts of internal revenue are twenty-six cents and nine mills *per capita*; in Connecticut the receipts are two dollars and fifty four cents *per capita*. In Arkansas there resulted during the last year to the Post Office Department a dead loss of over forty-nine cents for each inhabitant of the State, a loss in amount almost double the internal revenue receipts from the State! In Connecticut there accrued a net profit to the Post Office Department of twenty-six cents *per capita*. In Florida there are twenty-three adults unable to write to every one hundred inhabitants. In that State one patent was issued to every 31,291 inhabitants, or only six in the entire State. The internal revenue collected amounted to sixty-four cents *per capita* (of the entire population.) From that State the Post Office Department suffered a loss of ninety-two cents *per capita*. Contrast this with California, where the number of patents issued was one to every 2,422 inhabitants, and the amount of internal revenue collected was six dollars and forty-three cents *per capita*! There was a loss to the Post Office of one dollar and a half *per capita*, but this deficit is accounted for in part by the long lines of transportation, to the cost of which the thinly-settled intervening sections do not greatly contribute. But in California there are only four adults unable to write to every one hundred of the inhabitants.

In Tennessee twelve adults are unable to read and write to every one hundred of the inhabitants, and the State pays internal revenue at the rate of sixty-nine cents *per capita*, while Ohio, in which there are four illiterate adults to every one hundred inhabitants, pays five dollars and sixty-eight cents internal revenue *per capita*.

In Massachusetts, where there are three adult illiterate persons out of every one hundred inhabitants, the excess of post-office receipts above expenditures was over \$735,000.

Whatever other course would require consideration in a close and final examination, the relation of education to revenue, patents, and postal service is apparent.

## RECOMMENDATIONS.

The resources of this Bureau, though greater than at the time of making my last report, are still wholly insufficient to enable me to

adequately meet the rapidly increasing demands made upon it. I therefore recommend—

First. An increase of the permanent force of this office, so that the different divisions may each be in charge of a competent chief. Until this is done the Bureau cannot attain that efficiency which the public expect and have a right to demand.

Second. That sufficient accommodations be furnished for the requisite number of clerks, and for the library and various educational works and apparatus, the proper collection and preservation of which are so essential to the fullest usefulness of this office.

Third. That additional funds for the publication of circulars of information may be furnished to meet the rapidly increasing demand, which outruns the means now placed at my disposal.

Fourth. The enactment of a law requiring that all facts in regard to national aid to education, and all facts in regard to education in the Territories and the District of Columbia, necessary for the information of Congress, be presented through this office. For the purpose of enabling the Government to meet its responsibilities with respect to the education of the people in the Territories, I recommend that the office of superintendent of public instruction for each Territory be created, to be filled by the appointment of the President, and his compensation to be fixed and paid as in the case of other Federal appointees for the Territories.

Fifth. In view of the appalling number of children growing up in ignorance, on account of the impoverished condition of portions of the country in which slavery has been lately abolished, and in view of the special difficulties in the way of establishing and maintaining therein schools for universal education, and in consideration of the imperative need of immediate action in this regard, I recommend that the whole or a portion of the net proceeds arising from the sale of public lands shall be set aside as a special fund, and that this amount, or its interest, be divided annually *pro rata* between the people of the several States and Territories and the District of Columbia, under such provisions in regard to amount, allotment, expenditure and supervision, as Congress, in its wisdom, may deem fit and proper.

#### CONCLUSION.

The acknowledgments of the office are due and cordially tendered to the many persons in different parts of the country who have aided it in the prosecution of educational inquiries.

My obligations are especially due to the Assistant Secretary, to yourself, and to the President for direction and co-operation in the discharge of my laborious and responsible duties, and these obligations are all the more readily acknowledged, as they have been quickened and increased by an earnest and active sympathy for the success of the office, and a personal kindness toward me outrunning all mere official forms and obligations.

Very respectfully, your obedient servant,

JOHN EATON, JR.,  
*Commissioner.*

Hon. C. DELANO,  
*Secretary of the Interior.*

*Note by the compiler.*—The extreme length of the foregoing report has rendered it necessary to omit a number of foot-notes and statistical tables derived from the ninth census. The report is also accompanied by papers entitled: Abstracts from the

reports of school officers of States, Territories, and cities; general condition of education among the Indians; educational conventions and institutes; national schools of science; education of the blind; education of the deaf and dumb; annual review of education in foreign countries; education in foreign countries aided by American efforts; educational methods in Germany; progress of education for women; Cooper Union; education of artisans; the objects of the Kindergarten; musical education in common schools; the relation of education to insanity; relation of education to crime; the press as an educator; and general school statistics of the United States.

## REPORT OF THE ARCHITECT OF THE CAPITOL EXTENSION.

ARCHITECT'S OFFICE, UNITED STATES CAPITOL,  
*Washington, D. C., November 1, 1871.*

SIR: I have the honor to submit the following report, showing the condition and progress of the work on the Capitol building, and the general operations of this office, since the last annual report.

### CAPITOL EXTENSION.

By direction of the Committee on Ventilation a new floor has been placed in the Hall of Representatives, so planned as to make space for additional desks. The flues beneath are so arranged as to distribute fresh air more equally than heretofore from the fronts of the platform through adjustable registers.

The ventilating shaft has been considerably enlarged so as to insure a copious supply of air. A steam-engine, with two large fans, capable of expelling 50,000 cubic feet of air per minute, has been placed in the cellar of the south wing.

These changes will insure a rapid change of air even in such conditions of the atmosphere as when the present method is inefficient—that is, when the air is cold, moist, and foggy, and at times when the winds pack against the dome, and cause downward currents in all flues and outlets exposed to such winds. Some changes have been made in the floor of the Senate Chamber by the introduction of registers of a peculiar construction, devised by the Senate engineer. Fire-places have been placed in the cloak-rooms of the Senate, a line of shafting placed under the roof, by which the blinds of the sky-light can be adjusted with ease.

The lighting apparatus of the Senate will be started by means of "Nilson's electric lighter," which is now being put in place.

The corridors leading from the Senate to the Hall of Representatives have been enlarged, and the depressed floor between the rotunda and the old Hall has been raised to a line of the adjoining floors. The Rodgers bronze doors have been taken from the corridor and placed at the central entrance of the east front. Many rooms and passages have been painted. The decorations of the room of the Committee on Military Affairs of the Senate have been completed by three pictures in fresco, from subjects chosen by the chairman of that committee. The decoration of the Senate reception-room is progressing, leaving places to be filled in with portraits.

The terraces have been nearly completed, and the flagging laid, with the exception of the space in front of the western portico of the south wing, which space has been left unfinished, on account of the necessity of taking down and resetting the steps of this portico.

The steam-pipes of both wings have been covered with a fire-proof



felting, which has, so far, proved satisfactory as a non-conductor of heat: I believe quite a saving will be effected in the item of fuel by thus covering these pipes. The steam from the wings has been further extended in the central building, so that now nearly all the rooms and passages in that portion of the building have the benefit of heat from the wings.

The whole exterior of the old portion has been painted, as well as a large portion of the interior; the copper roofs have been kept in order and improved. The statuary of the central portico has been cleaned by means of the chisel, all other methods tried proving ineffectual, owing, I believe, to the injudicious use of acid in former cleaning. The old door-way at the central entrance of the east front has been cut away, to make space for the bronze doors, and a new door-way supplied

#### EXTENSION OF THE CAPITOL GROUNDS.

A large amount of earth has been deposited on the grounds at the south; a temporary roadway made on the north, marking the proposed arc, running from B street to Pennsylvania avenue and First street. I earnestly recommend that these grounds, or so much as now belongs to the United States, be laid out and planted, and that the street at the north be curbed and paved. The grounds at the south, being newly filled, will undoubtedly subside so much that, in my opinion, it would be useless to attempt planting next season. The time has now arrived when attention should be given to the grounds and streets around the Capitol, and I therefore recommend that the plateau at the eastern front be paved.

#### BOTANICAL GARDEN.

For the last few years the improvements and repairs of the buildings, &c., at the Botanical Garden, by the direction of the Joint Committee on the Library, have been done under the direction of this office.

During the last season the new railing on Maryland avenue has been completed, the flagging of the main walks finished, and a large basin, with marble coping, for the fountain, has been made, one green-house entirely reconstructed, and several others enlarged.

The attention of the committee having charge of these grounds is respectfully called to the condition of the wooden portion of the conservatory. It is in such a dilapidated condition that its destruction is possible at any high wind. To secure it for the present it has become necessary to place props at the south side, the winds having already forced the walls out of the perpendicular line. I therefore recommend that a wing, corresponding to the one at the west of the rotunda, be constructed.

#### EXTENSION OF THE GOVERNMENT PRINTING OFFICE BUILDING.

The extension of this building, authorized by act of Congress approved March 3, 1871, has been completed, and is now occupied. It is now one of the most extensive and convenient establishments for the purpose extant. A large amount of work has been done not contemplated in the original estimate, such as fitting up library, shelving stereotype and store-rooms, the cost of which has been paid out of the sum appropriated for the construction of this extension.

## PATENT-OFFICE BUILDING.

G street, from Seventh to Ninth streets, has been paved with an asphaltic concrete pavement, which was recommended by the owners of the larger portion of the property on the line of the pavement, who have to pay the expense of paving the northern half of this street.

Annexed are the statements of the expenditures of this office during the last fiscal year.

## CAPITOL EXTENSION.

*Amount expended from June 30, 1870, to June 30, 1871.*

Amount paid on rolls of mechanics, laborers, salaries, &c.....	\$46,133 27
Amount paid for paint and oil.....	3,670 74
Amount paid for miscellaneous bills, such as bricks, lime, sand, cement, &c.....	6,029 29
Amount paid for decorating and painting committee rooms.....	4,290 05
Amount paid for plumbing, gas and steam fitting.....	5,188 79
Amount paid for Seneca stone flagging.....	16,849 19
Amount paid for jointing and setting Seneca stone flagging.....	1,906 34
Amount paid for circular and straight granite coping.....	7,729 32
Amount paid for earth for terraces.....	701 40
Amount paid for marble.....	1,043 41
Amount paid for books and stationary.....	369 11
Amount paid for lumber.....	883 98
Amount paid for bronze lamp-posts and lamps.....	3,250 50
Amount paid for glass.....	259 20
Amount paid for grate-bars.....	273 90
Amount paid for copper.....	1,940 80
Amount paid for patent felting.....	625 35

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101,144 64
*Cash account.*

Amount available June 30, 1870.....	\$1,144 64
Amount appropriated June 15, 1870.....	100,000 00
Amount appropriated March 3, 1871.....	65,000 00
	166,144 64
Amount expended from June 30, 1870, to June 30, 1871.....	101,144 64
Leaving on the 30th June, 1871, an unexpended balance of.....	65,000 00

## HEATING, LIGHTING, AND VENTILATING HALL OF HOUSE OF REPRESENTATIVES.

*Amount expended from June 30, 1870, to June 30, 1871.*

Amount paid for services of mechanics, laborers, &c.....	\$5,874 07
Amount paid for plate-glass.....	1,987 50
Amount paid for hardware.....	1,218 77
Amount paid for iron castings.....	736 26
Amount paid for paint and oil.....	71 42
Amount paid for wiring door panels.....	97 36
Amount paid for parlor grates.....	300 00
Amount paid for lighting apparatus.....	3,374 00
Amount paid for plumbing and gas-fitting.....	515 98
Amount paid for sand.....	128 00
Amount paid for cement and lime.....	140 50
Amount paid for lumber.....	1,669 74
Amount paid for slate mantels.....	775 50
Amount paid for molded cornice.....	275 83

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17,164 93

*Cash account.*

Amount appropriated July 15, 1870 .....	\$15,000 00
Amount appropriated March 3, (1871) .....	20,000 00
	<hr/>
	35,000 00
Amount expended from June 30, 1870, to June 30, 1871 .....	17,164 93
	<hr/>
Leaving on the 30th of June 1871, an unexpended balance of .....	17,835 97
	<hr/>

## NEW DOME, UNITED STATES CAPITOL.

*Amount expended from June 30, 1870, to June 30, 1871.*

Amount paid on rolls of mechanics, laborers, &c .....	\$6,877 90
Amount paid for paint and painting .....	1,066 08
Amount paid for cast-iron seats .....	61 50
Amount paid for iron castings .....	214 56
Amount paid for hardware .....	96 66
	<hr/>
	8,316 70
	<hr/>

*Cash account.*

Amount appropriated July 15, 1870 .....	\$4,000 00
Amount appropriated March 3, 1871 .....	5,000 00
	<hr/>
	9,000 00
Amount expended from June 30, 1870, to June 30, 1871 .....	8,316 70
	<hr/>
Leaving on the 30th June, 1871, an unexpended balance of .....	683 30
	<hr/>

## EXTENSION OF CAPITOL GROUNDS.

*Amount expended from June 30, 1870, to June 30, 1871.*

Amount paid on rolls for labor, &c .....	\$14,384 23
Amount paid for Seneca flagging for terraces .....	3,626 40
Amount paid for jointing and setting Seneca flagging .....	2,129 19
Amount paid for lumber .....	671 20
Amount paid for gravel .....	192 00
Amount paid for paving .....	515 40
Amount paid for hardware .....	176 96
Amount paid for straight and circular coping .....	2,484 37
Amount paid for lime and cement .....	258 40
Amount paid for earth for filling .....	9,476 43
	<hr/>
	33,924 98
	<hr/>

*Cash account.*

Amount appropriated July 15, 1870 .....	\$25,000 00
Amount appropriated March 3, 1871 .....	20,000 00
	<hr/>
	45,000 00
Amount expended from June 30, 1870, to June 30, 1871 .....	33,924 98
	<hr/>
Leaving on the 30th June, 1871, an unexpended balance of .....	11,075 02
	<hr/>

## ANNUAL REPAIRS OF THE UNITED STATES CAPITOL.

*Amount expended from June 30, 1870, to June 30, 1871.*

Amount paid on rolls of mechanics, laborers, &c .....	\$3,151 68
Amount paid for plumbing, gas and steam fitting .....	2,936 34
Amount paid for scrubbing and dusting brushes .....	167 00
Amount paid for hardware and repairing hot-air furnaces .....	765 64
Amount paid for lumber .....	723 11
Amount paid for sand .....	102 00
Amount paid for paint and oils .....	93 08
	<hr/>
	12,939 33
	<hr/>

*Cash account.*

Amount appropriated July 15, 1870.....	\$10,000 00
Amount appropriated March 3, 1871.....	10,000 00
	<hr/>
	20,000 00
Amount expended from June 30, 1870, to June 30, 1871 .....	12,939 33
	<hr/>
Leaving on the 30th June, 1871, an unexpended balance of .....	7,060 67
	<hr/>

## ENLARGING SHAFTS OF ESCAPE FOR IMPURE AIR OF SENATE-CHAMBER.

*Amount expended from June 30, 1870, to June 30, 1871.*

Amount paid on rolls of mechanics, laborers, &c.....	\$1,994 15
Amount paid for plumbing and gas-fitting .....	350 33
Amount paid for lumber .....	78 06
Amount paid for hardware .....	77 46
	<hr/>
	2,500 00
	<hr/>

*Cash account.*

Amount appropriated July 15, 1870.....	\$2,500 00
	<hr/>

## TAKING OUT PRIVATE STAIRWAY FROM LAW LIBRARY.

*Amount expended from June 30, 1870, to June 30, 1871.*

Amount paid on rolls of mechanics, laborers, &c .....	\$1,648 77
Amount paid for taking out stone steps .....	200 00
Amount paid for lumber.....	151 23
	<hr/>
	2,000 00
	<hr/>

*Cash account.*

Amount appropriated July 15, 1870.....	\$2,000 00
	<hr/>

## EXTENSION OF THE GOVERNMENT PRINTING OFFICE BUILDING.

*Amount expended from May 2, 1871, to June 30, 1871.*

Amount paid for hauling stone.....	\$698 75
Amount paid for advertising.....	51 83
Amount paid for stone for foundations .....	1,333 71
Amount paid for furnishing and laying bricks for foundations .....	465 62
Amount paid for building stereotype-room.....	939 00
Amount paid on account of contract.....	12,000 00
	<hr/>
	15,488 96
	<hr/>

*Cash account.*

Amount appropriated March 3, 1871 .....	\$45,000 00
Amount expended from May 2, 1871, to June 30, 1871.....	15,488 96
	<hr/>
Leaving on the 30th June, 1871, an unexpended balance of .....	29,511 04
	<hr/>

Respectfully submitted.

EDWARD CLARK,  
Architect.Hon. COLUMBUS DELANO,  
Secretary of the Interior.

## COLUMBIA INSTITUTION FOR DEAF AND DUMB.

COLUMBIA INSTITUTION FOR THE  
INSTRUCTION OF THE DEAF AND DUMB.*Washington, October 30, 1871.*

SIR: In compliance with the acts of Congress making provision for the support of this institution, we have the honor to report its progress during the year ending June 30, 1871.

## NUMBER OF PUPILS.

The pupils remaining in the institution on the first day of July, 1870, numbered .....	76
Admitted during the year.....	24
Since admitted.....	19
Total .....	119

Under instruction since July 1, 1870, males, 101; females, 18. Of these 64 have been in the collegiate department, representing twenty-three States and the District of Columbia, and 55 in the primary department. Eight have left the college during the year, and seven have left the primary department, one having been removed by death. A list of the names and residences of pupils will be found appended to this report.

## HEALTH OF THE INSTITUTION.

Another year of almost unbroken exemption from disease has been vouchsafed to us. One case of sickness, however, terminated fatally, after a duration of but ten days, taking from our number Miss Virginia A. Patterson, the daughter of a soldier in the United States regular Army. Her disease was pneumonia, and the sad reflections which are always suggested by the death of the young were made doubly painful in her case by the fact that for several years she had not been inquired for by parent, relative, or friend from outside the institution. Her mind had been sufficiently developed to enable her to appreciate and grasp the comforting truths of religion, and she met death with calmness.

## DEATH OF DAVID A. HALL, ESQ.

The management of the institution has been called on to suffer in the death of another of its directors.

On the 24th of December, 1870, David A. Hall, esq., one of the founders of the institution, and a member of its first board, rested from his earthly labors.

Near the close of life, the pressure of advancing age had impaired the powers of his once vigorous and brilliant mind; but for a period of ten years he rendered valuable services to the institution. At a meeting of the board, held March 27, 1871, the following resolutions were adopted as expressive of the sentiments of his fellow-directors:

Whereas it has pleased Almighty God to remove from earth our late associate in this board, David A. Hall, esq., after a long life of usefulness: Therefore,

*Resolved*, That we, the surviving members of this board, do sincerely mourn the loss of our friend and fellow-director; and we desire hereby to record our appreciation of his most valuable services in the organization of the institution, and during those early days when its friends were few and its means small.

*Resolved*, That by his punctual attendance on the meetings of the board, even when age and growing infirmities rendered it difficult for him to be present, Mr. Hall has left a record of faithful discharge of duty worthy of the highest commendation.

*Resolved*, That these resolutions be inserted in the next annual report.

#### CHANGES OF OFFICERS.

In December, 1870, Mr. William L. Gallaudet, who had for nearly three years occupied the position of family supervisor, tendered his resignation, and retired from his office at the end of that month.

Mr. Gallaudet's health had been unfavorably affected by the pressure of his duties, and he felt himself unable to continue with us longer, save at the risk of his life. His uniform kindness to those who came under his control had gained him many friends here, and his resignation occasioned much regret.

A portion of the duties of the vacant office have been temporarily devolved upon Mr. Melville Ballard, of our corps of instructors, no permanent appointment having yet been made.

#### THE PRIMARY DEPARTMENT.

The progress of the pupils in this department has been satisfactory. The course of instruction has not differed in any essential particular from that pursued in previous years. A new element of discipline has been introduced, viz., a book of honor, in which are recorded from time to time the names of such as have "preserved for an entire month an unbroken record of faithful performance of duty, whether in school, at work, or in their general deportment." The incentive thus offered of having a permanent record made of each pupil's well-doing has raised the standard of behavior and scholarship during the year in a marked degree.

The increasing cares and duties devolved upon the president, by the growth of the collegiate department, made it desirable that he should be relieved to some extent of the management of the primary department. To this end Mr. James Denison, the senior instructor in this department, who has rendered thirteen years of valuable service to the institution, was appointed principal, to him being committed the duty of arranging the classes and directing the course of study to be pursued.

#### THE COLLEGE.

The progress of this department of the institution has been most gratifying. The students, with but few exceptions, have shown a high appreciation of their unusual privileges, in an advanced standard of scholarship and deportment. The number receiving the benefits of the college has been greater than ever before, every section of the country being now represented except the Pacific coast.

#### ILLUSTRATIVE APPARATUS.

A little more than six years ago, Edward Owen, esq., of Washington, presented to the institution a note of the Foundry Methodist Episcopal Church, for \$500. This note has recently been paid, with interest, amounting in all to the sum of \$642. This money has been set apart for the purchase of chemical and philosophical apparatus, the articles purchased to bear the name of the donor, and so perpetuate in the institution the memory of his generosity.

## ASSISTANCE OF POOR STUDENTS.

The liberality of Congress and the benevolence of individuals has enabled the board thus far to render all needed assistance to deaf mutes who, while they possessed the qualifications fitting them for higher education, lacked the means necessary to meet the expenses thereof.

In March, 1867, Congress provided for the free admission of ten youth into the collegiate department from the States and Territories. In July, 1868, this number was increased to twenty five, and private subscriptions had furnished the means for the support of some twelve more. This action of Congress was taken by the board as an indication of a purpose on the part of the Government to extend the advantages of the college to the deaf and dumb of all the States. In this expectation, thus excited, they were, however, disappointed by the repeal, in July, 1870, of the provisions of 1867 and 1868; and had there not remained in their hands a considerable balance of funds derived from sources other than the Treasury of the United States, which could be applied to the support of poor students, a very serious embarrassment would have been encountered. This resource will soon be exhausted, and the directors are compelled to ask the attention of Congress to the subject, in the hope that some further legislation may be had which may enable them to hold the doors of the college still open to worthy deaf-mutes from every State.

And by way of explanation, lest misconception should arise as to the number to be thus provided for, it should be here remarked that *the ordinary education of the mass of deaf-mutes in the several States and Territories is amply provided for by local appropriations out of moneys raised by local taxation.* In the year 1870 there were 3,732 pupils under instruction in thirty-four local institutions, supported by State or private beneficence. These children represent a total population of deaf mutes of all ages in the United States of about 20,000.

We have reason to suppose that, of pupils in the local institutions, not more than one in twenty are proper subjects for collegiate instruction, while a still smaller proportion would be likely to seek to avail themselves of provisions for such a course of study. And when it is borne in mind that admission to the college necessitates a previous graduation from some one of the local institutions, it will be easily understood that its walls cannot be overrun by large numbers for many years to come.

From the best data that can be gathered, the board are of opinion that the number of deaf mutes in the United States, properly qualified to sustain a college course of study, cannot exceed two hundred at any one time during the next twenty years. They are also of the opinion that the number now in the college, viz., fifty, may be expected to rise to one hundred within the next five years.

They would respectfully urge upon Congress the importance of perfecting the work so nobly begun by extending the advantages of the college to deaf mutes from the whole country, in a manner that shall do no injustice to any State or section.

And if there be any who object that the collegiate instruction of the deaf and dumb is a work not properly to be devolved upon the Federal Government, it may be replied that Congress has hitherto, by its vast appropriations of public lands for the endowment of agricultural and other colleges, undertaken to accord aid for all time to speaking and hearing youth in the pursuit of higher education; and that from these sources of help so freely given to their more favored brethren, the children of silence are of necessity forever shut out.

## COMPLETION OF THE MAIN CENTRAL BUILDING.

This building, spoken of in our last report as nearly completed, was finished and fully occupied in January last. The additions to the comfort of the students and pupils afforded by this beautiful gift of the Government are very great.

The edifice faces nearly south, and is so located as to connect the primary department building on the east with the college building on the west. It consists of a main building and two wings. It is 216 feet long, by a width through the main building of 76 feet. The building is faced on all sides with Connecticut brown-stone, interspersed with courses of white Ohio sandstone, and covered with roofs of red and blue slate, laid in patterns and courses.

The main entrance is under a recessed porch, formed by three pointed arches of alternate brown and white sandstone blocks, supported by double sets of dwarf columns of highly polished Scotch granite, with brown-stone bases and carved white sandstone capitals. This porch is paved with white and black marble tiles, and surmounted by an angular pediment containing a carved half-relief figure of the American eagle, with the stars and stripes on the shield over its breast.

From this porch one enters through a small vestibule at either end into the main hall, or chapel, a room 56 feet square and 38 feet high, with a paneled ceiling of light and dark colored wood, with massive brackets, cornice and panel moldings, the walls being frescoed in delicate tints in plain panels. The walls, to about 8 feet from the floor, are protected by a paneled wainscot, painted in strong party colors, with the pulpit, platform and front, and folding-doors to match. The room is lighted by ten large stained-glass windows.

Adjoining on the east, and separated from the chapel by eight sliding doors 15 feet high and 27 feet wide, is the lecture-room. Over the sliding doors is a solid white sandstone arch of 27 feet span, springing from light stone columns with carved capitals. The lecture-room is about 30 by 40 feet in size, with a raised floor; the finish of the ceiling, wainscoting and wall-painting is similar to the chapel.

The remainder of the east wing on this floor is occupied by a large dining-hall, or refectory, for the pupils of the primary department, with its corridors and stairs; and with kitchens, bakery, and store-rooms in the basement below, and large dormitories in the attic above.

The west wing contains a large dining-hall for the students of the college, with its pantries and store-rooms. In the hall of this wing a stairway affords access to the tower. In the basement under this wing is an extensive laundry, steam-drying rooms, and store-rooms, while the basement under the chapel contains the fuel and boiler-rooms, from which the building is supplied with low-pressure steam heat. The wide hall connecting the two wings through the basement has a railway track and small hand-car, to transport the victuals and dishes from the kitchen to the dumb-waiter, for the student's refectory. The building is supplied with gas by pipes from the city.

\* \* \* \* \*

## DEDICATION OF THE MAIN CENTRAL BUILDING.

On Sunday afternoon, the 29th of January, dedicatory exercises were held in the hall of the new building, the President of the United States occupying the chair, in his office as patron of the institution.

\* \* \* \* \*



## EXPENDITURES.

The receipts and disbursements for the year now under review will appear from the following detailed statements:

## I.—SUPPORT OF THE INSTITUTION.

*Receipts.*

Balance from old account.....	\$4,895 83
Received from Treasury of the United States.....	40,775 00
Received from board and tuition.....	1,350 00
Received from sale of live stock.....	119 86
Received from sale of old building material.....	262 21
Received from students for books and stationery.....	336 67
Received from pupils for clothing.....	48 20
Received from work done in shop.....	208 52
Received from damage to grounds by stray cattle.....	53 21
Received from Comptroller of the United States, to balance errors.....	5 47
<b>Total.....</b>	<b>48,054 97</b>

*Disbursements.*

Expended for salaries and wages.....	\$21,790 70
Expended for meats.....	5,929 25
Expended for butter and eggs.....	2,366 53
Expended for groceries and feed.....	4,692 17
Expended for bread.....	1,669 78
Expended for household expenses including vegetables.....	1,963 02
Expended for milk.....	463 73
Expended for fuel.....	1,856 80
Expended for gas.....	1,299 98
Expended for repairs on buildings.....	784 22
Expended for furniture.....	722 14
Expended for blacksmithing and general repairs.....	274 14
Expended for clothing and dry-goods.....	456 12
Expended for books.....	715 85
Expended for medicines and chemicals.....	259 69
Expended for medical attendance.....	691 00
Expended for a work-horse.....	109 00
Expended for four cows.....	330 00
Expended for hardware.....	283 89
Expended for rent of safe in deposit company.....	10 00
Expended for ice.....	251 25
Expended for farming implements and seeds.....	277 06
Expended for harness.....	40 00
Expended for printing.....	103 50
Expended for illustrative apparatus.....	126 75
Expended for commencement expenses.....	95 00
Expended for carriage hire.....	51 50
Expended for funeral expenses.....	42 50
Balance.....	359 40
<b>Total.....</b>	<b>48,054 97</b>

## II.—ERECTION AND FITTING UP OF BUILDINGS.

*Receipts.*

Received from Treasury of the United States.....	\$106,067 00
--	--------------

*Disbursements.*

Balance from old account.....	\$4,897 19
Paid J. G. Naylor on contracts.....	80,000 00
Paid Vaux, Withers & Co., architects, for services.....	2,279 50
Paid for labor.....	1,122 67
Paid for lumber and other building materials.....	1,777 "
Paid for furniture.....	1,471 "

Paid for paints and oils.....	\$124 73
Paid for iron-work.....	1, 069 03
Paid for plumbing and gas-fitting.....	1, 964 43
Paid for gas-reflector in hall.....	125 00
Paid for lightning-rods.....	221 10
Paid for tin work.....	450 00
Paid M. G. Emery & Bro., for extra stone work.....	2, 204 33
Balance due the United States from disbursing agent.....	8, 380 30
<b>Total .....</b>	<b>106, 087 00</b>

## III.—IMPROVEMENT OF GROUNDS.

*Receipts.*

Received from the Treasury of the United States .....	\$6, 000 00
---	-------------

*Disbursements.*

Balance from old account.....	\$1, 453 41
Paid for labor.....	736 57
Paid for grading.....	930 50
Paid W. J. McCollam for building terrace wall.....	524 62
Paid for trees, shrubs, and seeds.....	52 89
Balance due the United States from disbursing agent.....	2, 302 01
<b>Total .....</b>	<b>6, 000 00</b>

## ESTIMATES FOR NEXT YEAR.

The following estimates of appropriations required for the service of the fiscal year ending June 30, 1873, are respectfully submitted:

For the support of the institution, including \$500 for the purchase of books and illustrative apparatus, \$48,000.

To provide for payments falling due on or after July 1, 1872, on the purchase by the institution of the estate known as Kendall Green, \$70,000.

For continuing the work on the inclosure, improvement and grading of the grounds of the institution, \$6,000.

The following is respectfully submitted for insertion in the deficiency bill:

For furnishing, fitting-up, and repairing the buildings of the institution, \$9,500.

The amount of the first estimate exceeds, by \$7,500, the sum appropriated to similar objects for the current fiscal year. The reasons for this increase will appear by a reference to our thirteenth annual report. On page 16 of that report it will be seen that the amount received from the United States for the support of the institution during the year ending June 30, 1870, was \$45,000.

Our receipts from other sources during that year were such that, at its close, a balance remained unexpended of \$4,895 83. This was applied to the service of the year ending June 30, 1871.

The knowledge of the fact in advance that there would be this balance remaining from the appropriation of the year ending June 30, 1870, led us to submit an estimate of but \$40,775 for the current expenses of last year. This, added to the balance above stated, gives an aggregate of \$45,670 83, which was required to meet the current expenses of the institution during last year, excepting a balance of \$389 40 which remained on hand July 1, 1871.

Hence the apparent increase of our estimate for next year's current expenses over that of last year, of \$7,500, is actually an increase of only

\$1,200, which will be needed to meet the additional expense involved by the increase in our numbers, which our experience of the past twelve years has taught to place annually for the next few years.

The second estimate to pay for land purchased for the use of the institution is based upon the belief that Congress, if by its committees or otherwise, should cause an examination to be made into the terms and object of the purchase of Kendall Green, will not fail to perceive the wisdom of the transaction as being one of great material benefit to the institution, and of every advantage to the Government.

At the corner of one of our lands, the most remote point of which is about one mile from the Capitol building, together with buildings and other improvements, are sold to the institution, valued at \$25,000, as shown in the third estimate. The land, therefore, cost, last year, \$8,000, and \$17,000 per acre.

Within the last year, however, outside the city limits, a mile east of our premises, has been sold, for \$1,600 an acre, cash, and land to the west, for \$2,000 an acre. This land has been sold at \$2,000 an acre.

In relation to the importance to the institution of possessing and retaining a permanent tract of the security one acres, and in this connection (see the report last year, made to our last annual report, pages 18 and 19,) a permanent tract of Kendall Green as an investment may be made to more fully to the advantage of the Government; nor should it be deemed unnecessary to this permanent purchase the entire tract, portions of it could be sold, and the proceeds used to purchase places which would give a rich return for the investment, either. And so a fund might be created and invested which would go on in meeting the current expenses of the institution, and the surplus would be sold on the public Treasury.

Within the last year, however, on the investment made by the purchase of Kendall Green, has been generated for an immediate income of no inconsiderable amount, to be received in the form of farm and garden produce, and stock. At this season an exact report cannot be given of the value of the products for the year 1871, but enough has been sold to indicate that it is certain that materials useful for the institution must have been furnished from our own grounds for the year 1871, and the sum of \$1,000.

The balance of the payments already due on account of the purchase of Kendall Green, the subscriptions have been solicited in some of our reports, and the sum of \$8,000 has already been paid, and it is estimated that the balance due in this manner for the payment of \$150,000, the purchase money, and the interest that has accrued or will accrue to the 1st of July, 1872. There will then remain the balance of \$150,000, to be paid, and this the estimate is based upon.

The payments made on the subscriptions already obtained have been made, and the objection being raised on every hand, that the institution should not be taxed to do what is practically impossible, a statement and answer has been that we were compelled to do so, and that when we did so, we had the opportunity afforded to us until the transaction could fairly be paid before Congress could be appealed to, in order that the institution should not be dishonored. And the subscriptions already paid will be found appended to this report.

A list of our premises, including the Kendall Green purchase, is also appended to this report.

The amount asked for in the third estimate is needed to complete the

inclosure of our premises, for the proper grading and terracing of the grounds immediately around the buildings, and for the completion of our system of sewerage.

The fourth estimate asked to be inserted in the deficiency bill is to provide for certain repairs and improvements within our buildings, the necessity for which was not foreseen when our estimates for the present year were sent in. Certain of these repairs were so necessary that they have been made without waiting for the appropriation. In one instance an expenditure of \$1,200 was inevitable, to replace portions of the heating apparatus in two of our principal buildings, which had burned out by long use, no other means of heating the buildings being available. In another instance it was found that exterior wood-work was suffering and in danger of decay for lack of paint. Furniture and bedding which have been in use for years need to be replaced, and the increase in our numbers, alluded to elsewhere, involves the providing of quite an amount of new furniture.

It is hoped that, in view of these considerations, it may not seem improper that the amount asked for should be appropriated in the deficiency bill.

All of which is respectfully submitted, by order of the board of directors.

E. M. GALLAUDET,  
*President.*

Hon. COLUMBUS DELANO,  
*Secretary of the Interior.*

## GOVERNMENT HOSPITAL FOR THE INSANE.

### REPORT OF THE BOARD OF VISITORS AND SUPERINTENDENT OF CONSTRUCTION.

GOVERNMENT HOSPITAL FOR THE INSANE,  
*St. Elizabeth, D. C., October 31, 1871.*

SIR: By direction of the board of visitors, the undersigned respectfully submit the following report of the operations of the hospital for the year ending June 30, 1871, and of the wants of the institution for the year ending June 30, 1873, as required by section 2 of the act of March 3, 1855.

The number of patients under treatment on the 30th day of June, 1870, was:

From the Army, white males.....	136	
“ “ “ colored “ .....	7	
“ “ “ white “ (discharged).....	79	
“ “ “ colored “ .....	3	
“ “ “ white “ (civilian).....	5	
“ “ “ colored “ .....	1	
“ “ “ white females “ .....	2	
	<hr/>	231
From the Navy, white males.....	21	
“ “ “ colored “ .....	1	
“ “ “ white “ (discharged).....	2	
“ “ “ colored “ .....	1	
	<hr/>	25
	<hr/>	256
From civil life, white males.....	67	
“ “ “ “ females .....	101	
	<hr/>	171

From civil life, colored males .....	10
" " " " females .....	17
	<hr/> 27
	<hr/> 128
Males, 331; females 123; total .....	<hr/> 454

The number of patients admitted during the year ending June 30, 1871, was:

From the Army, white males .....	11
" " " colored " .....	1
" " " white " (discharged) .....	51
" " " " female .....	1
	<hr/> 54
From the Navy, white males .....	12
	<hr/> 160
From civil life, white males .....	11
" " " " females .....	28
	<hr/> 69
" " " colored males .....	11
" " " " females .....	5
	<hr/> 16
	<hr/> 85
Males, 160; females, 34; total .....	<hr/> 194

Two persons were re-admitted in the course of the year; consequently there were two less persons than cases under treatment.

The whole number of patients under treatment in the course of the year 1870-71, was:

From the Army, white males .....	180
" " " colored " .....	8
" " " white " (discharged) .....	130
" " " colored " .....	3
" " " white " (civilian) .....	3
" " " colored " .....	1
" " " white females " .....	3
	<hr/> 325
From the Navy, white males .....	33
" " " colored " .....	1
" " " white " (discharged) .....	2
" " " colored " .....	1
	<hr/> 37
	<hr/> 365
From civil life, white males .....	108
" " " " females .....	132
	<hr/> 240
" " " colored males .....	21
" " " " females .....	22
	<hr/> 43
	<hr/> 283
Males, 491; females, 157; total .....	<hr/> 648

The number of patients discharged in the course of the year, was:

Recovered, from the Army, white males .....	22
" " " colored " .....	1
" " " white " (discharged) .....	5
	<hr/> 28
Recovered, from the Navy, white males .....	2
	<hr/> 30
Recovered, from civil life, white males .....	18
" " " " females .....	11
	<hr/> 29

Recovered, from civil life, colored males	3
" " " " female	1
	— 4
	33
Improved, from the Army, white males	3
" " " " (discharged)	2
	— 5
Improved, from the Navy, colored male	1
	— 6
Improved, from civil life, white males	9
" " " " females	7
	— 16
" " " " colored males	2
	— 18
	24
Unimproved, from the Army, white male, (discharged)	1
" " " " males	3
" " " " females	2
	— 5
" " " " colored males	2
" " " " female	1
	— 3
	— 9
Males, 85; females, 11; total	96

**The number of patients who died in the course of the year, was:**

From the Army, white males.....	10	
" " " " (discharged) .....	5	
	—	15
From the Navy, white males .....		4
	—	19
From civil life, white males .....	10	
" " " " females .....	9	
	—	19
" " " colored males .....	4	
" " " " females .....	2	
	—	6
	—	25
Males, 33; females, 11; total .....		44

The number of patients remaining under treatment on the 30th day of June, 1871, was:

From the Army, white males.....	145
" " " colored ".....	7
" " " white " (discharged).....	117
" " " colored " ".....	3
" " " white " (civilians).....	3
" " " colored ".....	1
" " " white females ".....	3
	— 279
From the Navy, white males.....	27
" " " " " (discharged).....	2
" " " colored " ".....	1
	— 30
	— 309
From civil life, white males.....	68
" " " " females.....	103
	— 171
" " " colored males.....	10
" " " " females.....	18
	— 28
	— 199
* Males, 384; females, 124; total.....	508

The figures in the preceding table designate persons employed in the various services of the country, and do not include those of the military in 1940, and those designated as military in 1945, and those admitted by order of the Government to the same category.

The results of the work of the hospital will have from hour to hour and day to day, the same as other years, performed the unremitting mental labor and felt the increasing responsibilities of the care and treatment of our insane persons, embracing a very wide range of intellectual and moral culture of such importance, of the ethical task, and exhibiting every form of mental malady, from every troublesome and dangerous propensity, and every phase of degeneration, feel profoundly grateful for the general prosperity which has attended the operations of the institution. The average population of the hospital and the proportion of troubled persons have considerably exceeded those of any previous year of our history. There have never been so large a number, nor so large a proportion to the whole number of home and out-patients, that have sought the asylum that give us so entrusted with their care, have been so active. Several of our former clinical subnormal attempts have been made, that none of the last were in any degree successful, and, but more of the last, and it has been the same, but it was the first manifestation of the second disposition. It is undoubtedly true that some measure of the cause of insanity—the under prevalence of intemperance, and, more generally, that of wealth and poverty—is one of the causes of our mental disease, and there is little doubt that the economic conditions that have led to the disarming the war has been a contributing cause to the mental distress of the people, and, as a result, that it has been a contributing cause to the prevalence of violence and crime in our midst.

The second volume, which is bound in a handsome salmon-colored cloth, contains a collection of the more important historical and literary references and footnotes to the popular volumes. It is a valuable addition to the series, and is especially useful to those who wish to go further into the study of the history of the United States. The volume is bound in a handsome salmon-colored cloth, and is a valuable addition to the series.

There were 127 deaths from the disease in the population of the island in 1900, and 100 in 1901. The total number of the population of the island was 1,000 in 1900, and 1,000 in 1901. The number of deaths from the disease was 12.7% of the population in 1900, and 10% in 1901. The number of deaths from the disease was 12.7% of the population in 1900, and 10% in 1901. The number of deaths from the disease was 12.7% of the population in 1900, and 10% in 1901.

which is really low in view of the fact that a large proportion of the inmates of the institution are chronic cases that, with rare exceptions, remain here until they terminate in death. The officers of the national hospital rarely experience the great relief which attends the removal of a feeble, declining patient by his friends, in order that he may be nursed by them in the last days of his life, and finally die at home. Of course, such removal is impracticable in the case of patients belonging to distant States, and some have no known friends, but we have sometimes wondered that so few of the friends of District patients have been disposed to take them home and minister to them in their last hours, and, when they have died, bury their remains in their own way, in grounds of their own choice.

The *admissions*, in the course of the year, were 194, and the whole number under treatment was 648, showing the increase in the population of the hospital that has been anticipated by adequate provision for their support. In the year ending June 30, 1870, there were 180 admissions, and a total of 549 under care. The rule that the crowded condition of the house made it necessary to adopt several years ago, of admitting only such patients as the law requires, has been observed during the last year.

The *recoveries* were 63, and besides those that appeared to have been fully restored to reason, 24 were removed by friends in such an improved condition as to be able to reside at home. Nine only, fewer than usual, were removed in an unimproved condition, either to reside at home with relatives, or near the latter in the institutions of their respective States. The ratio of recoveries to discharges, including deaths, was 45 per cent.; to discharges exclusive of deaths, 66 per cent.

The *extension* of the hospital, authorized by an appropriation made at the second session of the last Congress, is now substantially completed and occupied. It was intended to accommodate 100 patients in the three principal stories, and in the basement story to afford lodging-rooms and a hall for single resident mechanics and farm hands, and tailoring and shoemaking shops and store-rooms. In the crowded state of the house, it at once became necessary to test the *maximum* capacity of the new building, and we find that its three wards will afford comfortable and healthful accommodations for 129 patients of the quiet chronic class. The dining and attendants' rooms are taken from the old building at its connection with the new, and the food for the occupants of the new building is cooked in the old, and their washing is done in the common laundry, and the gas made in the common generator of the establishment. An inspection of the basement story of the extension, with its furniture and fitting up, will convince any practical person that in extent and cost it is equivalent to all the room and accommodations the new building derives from the old. It may be fairly assumed, then, that the cost of the extension, including furnishing and fitting-up complete, embraces all the material provisions that are required, except land and officers' quarters, for the proper care of 129 patients of the quiet chronic, dependent class, at a cost of \$59,482, (the amount of the appropriation for the building and the entire cost of it ready for occupation,) or of \$461 10 per patient. We earnestly invite public authorities, whose duty it is to provide new or extend existing provisions for the care of the chronic insane of the dependent classes, to visit the extension just completed here for that purpose, and closely inspect its construction, furniture, and fitting-up, including lighting and heating, and see for themselves what they really are. We confidently claim that they are superior, architecturally and mechanically, and in all special arrange-





Recovered, from civil life, colored males	3
" " " " female	1
	— 4
	33
Improved, from the Army, white males	3
" " " " (discharged)	2
	— 5
Improved, from the Navy, colored male	1
	— 6
Improved, from civil life, white males	9
" " " " females	7
	— 16
" " " " colored males	2
	— 18
	24
Unimproved, from the Army, white male, (discharged)	1
" " " " males	3
" " " " females	2
	— 5
" " " " colored males	2
" " " " female	1
	— 3
	— 9
Males, 85; females, 11; total	96

**The number of patients who died in the course of the year, was:**

From the Army, white males.....	10	
" " " " (discharged) .....	5	
	—	15
From the Navy, white males .....	4	
	—	19
From civil life, white males .....	10	
" " " " females .....	9	
	—	19
" " " colored males .....	4	
" " " " females .....	2	
	—	6
	—	25
Males, 33; females, 11; total .....		44

The number of patients remaining under treatment on the 30th day of June, 1871, was:

From the Army, white males.....	145
" " " colored ".....	7
" " " white " (discharged).....	117
" " " colored " ".....	3
" " " white " (civilians).....	3
" " " colored ".....	1
" " " white females ".....	3
	<hr/> 379
From the Navy, white males.....	27
" " " " " (discharged).....	2
" " " colored ".....	1
	<hr/> 30
	<hr/> 399
From civil life, white males.....	68
" " " " females.....	103
	<hr/> 171
" " " colored males.....	10
" " " " females.....	18
	<hr/> 28
	<hr/> 199
* Males, 324; females, 124; total.....	508

The use of the word *discharged* in the preceding tables designates persons formerly in the military or naval service of the country, and admitted by authority of the act of July 13, 1866; and those designated as *admitted* are civil employes of the Army admitted by order of the Secretary of War, under authority of the same act.

The resident officers of the hospital, who have from hour to hour and day to day, through another year, performed the unremitting mental labor and felt the unceasing responsibilities of the care and treatment of 648 insane persons, embracing a very wide range of intellectual and moral culture, of social position, and of official rank, and exhibiting every form of morbid mental manifestation, every troublesome and dangerous propensity, and every physical complication, feel profoundly grateful for the general prosperity which has attended the operations of the institution. The average population of the hospital and the proportion of troublesome cases have considerably exceeded those of any previous year of its history. There have never been so large a number nor so large a proportion to the whole number of homicidal and suicidal cases, the two classes of the insane that give those intrusted with their care the deepest anxiety. Several desperate homicidal and suicidal attempts have been made, but none of the first were in any degree successful, and but one of the last, and in his case the suicidal act was the first manifestation of the suicidal disposition. It is undoubtedly true that some increase of the causes of insanity—the wider prevalence of intemperance, and a more general thirst for wealth and notoriety—is one of the legacies of our gigantic civil war; and there is little doubt that the character of the mental manifestations of the insane since the war has been materially determined by the familiarity of the public mind, acquired during that struggle, with the violence and spirit of violence which necessarily attend all warfare.

This seems to be a fit occasion for the board of visitors and resident officers to record their high appreciation of the frequent and marked expressions they have received from time to time, in previous years as well as in the one that has just passed, both from the medical profession and people generally, of the country, of their confidence in the management of the hospital and of their approbation of the result of an earnest and persevering effort to establish and conduct at the national capital an institution that should present an advance representation of the science, humanity, and patriotism displayed by the American people in their provisions for the care of the insane, particularly of the dependent classes, and for the medical and moral treatment of mental disease. The directors of the institution have received special encouragement from one generation's approval of its provisions and management which has been expressed by the medical profession of the District of Columbia, and by the medical officers of the sister institutions for the insane in the country—by one class of men that is best acquainted with the history and character of the hospital, and by another which, by its studies and experience, is best qualified to judge of the merits of such establishments.

The general health of the resident population of the hospital has been excellent. It is true that the mortality among the patients was larger than the year before, partly on account of a number of cases of traumatic exhaustion dying within a few days of their admission, and partly on account of the *tolling over* of a number of feeble old people, whose "sand of life" had nearly run out the year before. The rate of mortality was less than seven per cent. of the whole number of cases under care.

manner that will harmonize with the original building, and by restoring the proper classification of the patients, relieve the quiet and convalescent classes from a discomforting and detrimental association with the violent and noisy. The accompanying plan of the proposed extension shows that it will have a corridor connection with the western section of the west wing of the original edifice, which is two stories, and was built upon an elevated foundation to bring the first story on a level with the site of the center building, and an embankment thrown about it. This extension will be three stories high. The first or basement story will be entirely above ground, and have a rustic exterior like the extension just finished, with an interior finish corresponding with the other stories; and the second and third stories will have the same elevation as the first and third of the old building. It is proposed to give this building, in construction and details of lighting, heating, ventilation, food-supply, and inspection, the most perfect adaptation in our power to the custody and treatment of the excited classes of the insane—the most difficult classes to care for safely and comfortably, and the most important, because they often embrace the recent and curable cases in the most critical stages of their disorder. It is estimated that a building, on the plan presented, properly constructed and fitted up for the excited classes, of sufficient size to accommodate 18 patients on a floor, or 54 in all, will cost \$37,800.

The heating-boilers in the west and first-erected wing have been in use since the house was opened in 1855, and are very nearly worn out, and as they are liable to give out altogether at any time, we think it would be unsafe to attempt to use them beyond the approaching winter. When renewed, their capacity should be considerably increased, in order to be entirely adequate to heat the recent extension, and that now proposed. The estimated cost of four such boilers as are needed, including connections and setting, is \$6,000.

The tract of land, containing about 150 acres, last purchased by the Government for the use of the hospital, is used, with great economical advantage to the institution, for grazing milch-cows and beeves, and for raising hay, corn, and roots. As there is not a barn or a shed on the place worthy of the name, it seems obvious that a good, substantial barn is an economical necessity, both to shelter the stock in inclement weather and store their forage.

The earlier purchase of 56½ acres is a detached piece of land, a mile away from the site of the hospital; its soil is well adapted to the growth of the cultivated grasses, and it is devoted to raising hay for the stock of the establishment. It is proposed to build upon this tract a plain, substantial *hay-barn*, for the storage of the hay at the time it is cut, and for its preservation in good condition until it is required for consumption by the stock.

Large quantities of poultry-meat and of eggs are required in a hospital of this character and magnitude; and the experience of the institution shows that, by having a proper poultry house and yards near running water, poultry-raising can be made of considerable economical advantage, and also afford a light employment, in which numbers of patients will take an active and useful interest. The estimated cost of these three improvements, which, as they are similar in character, are classed together, is \$9,000. It is obvious that the sum asked will only be sufficient to erect and fit up plain wood structures on stone foundations, and that is all that is contemplated. It is intended that they shall be convenient and durable, and respectable in appearance.

About five miles of roads and walks have been laid off in the park

and other exercise grounds of the patients, and the attempt has been made to drain, grade, and gravel them with the ordinary farm force during the winter, but the farm and garden hands and teams having been needed and occupied in underdraining and improving the farms and gardens as such, but little has been accomplished in road and walk making; and, when not engaged in raising the annual crops, the farm force will all be needed for farm improvements for several years to come. The completion of the roads and walks intended for the patients to exercise and obtain recreation in, is also needed to enable the hospital to fully accomplish the great objects of its construction and maintenance. If the sum of \$2,000 should be judiciously expended on the roads and walks, they could then be kept in order, and perhaps further improved from time to time, by the regular farm hands. The board therefore respectfully ask for \$2,000 for this purpose.

The chaplains of the institution have been earnest and attentive in the discharge of their duties, and have been at evident pains to adapt the character of their addresses, and the manner of performing their services, to the intellectual and moral capacities and peculiar susceptibilities of the inmates of the establishment.

Dr. Eastman and Dr. Franklin have now been connected with the hospital, one nearly seven and the other about six years; and it affords us pleasure to again bear testimony to the unabating zeal and fidelity, and to the skill and efficiency, increasing with experience, with which they have continued to discharge their delicate and responsible duties.

The vacancy in the position of assistant physician, occasioned by the resignation of Dr. W. W. Godding, to take charge of the Massachusetts State Lunatic Hospital, at Taunton, and still existing at the date of our last report, has since been filled by the appointment, as third assistant physician, of Dr. Warren G. Hutchins, a graduate both of the academical and medical departments of Dartmouth College. Dr. Hutchins has now been on duty for several months, and has thus far fully justified the high testimonials upon which he was appointed.

The capacity of Miss Bennett, the housekeeper of the hospital, has steadily risen with the increasing demands upon it, and her devotion to the interests of the institution is untiring.

We desire to express a sense of personal obligation, not only to the officers whose names we have mentioned, but to the attendants and all others who have contributed to the welfare of the patients, and to the usefulness and good name of the hospital.

We have the honor to be, sir, very respectfully, your obedient servants,

W. GUNTON,

*President of the Board.*

C. H. NICHOLS,

*Superintendent, and ex officio Secretary of the Board.*

HON. COMMISSIONER DELAND

*Secretary of the Board.*

## COLUMBIA HOSPITAL FOR WOMEN AND LYING-IN-ASYLUM.

WASHINGTON, D. C., *October 20, 1871.*

SIR: I have the honor to submit herewith the sixth annual report of Columbia Hospital for Women and Lying-in Asylum:

Number of patients admitted for treatment during the year has been .....	245
Of these 38 were pay patients, and 207 were free patients.	
Number of out-door patients admitted for treatment .....	2,011
Total .....	<u>2,256</u>
Number discharged cured .....	1,025
Number discharged relieved .....	307
Number died .....	15
Number sent to Insane Asylum .....	2
Number at present in hospital .....	19
Number out-door patients under treatment .....	285
	<u>2,256</u>
Total number of prescriptions compounded during the year .....	5,793

## NATIVITY.

English .....	32	Mexican .....	4
Irish .....	380	Spanish .....	9
German .....	170	Hungarian .....	4
French .....	14	West Indian .....	1
Austrian .....	7	American .....	1,655

I would most respectfully suggest that the sum of \$18,300 be asked for the support of the hospital for the ensuing fiscal year, and \$5,000 for the rent and necessary repairs to the building.

In making this estimate I have calculated upon the receipt of \$5,000 from the District government, in accordance with a bill recently introduced in the District legislature, making an appropriation of that amount to cover the expenses incurred in the support of those patients properly belonging to the District, and who are not chargeable upon the General Government.

I would again earnestly recommend the purchase by the Government of the building and grounds now occupied by the hospital. The position is all that could be desired, the price asked far below its market value, and the building so constructed that with a moderate outlay it can be made to accommodate one hundred patients.

The entire amount for completing the purchase and making the alterations would be \$30,000.

I have the honor to be, very respectfully, your obedient servant,  
J. H. THOMPSON, M. D.,  
*Surgeon-in-Chief.*

## REFORM SCHOOL OF THE DISTRICT OF COLUMBIA.

WASHINGTON, *October 9, 1871.*

SIR: On behalf of the board of trustees of the Reform School of the District of Columbia, I have the honor to present our second annual report.

It is gratifying to be able to report that the institution has more than

fulfilled the expectations of its friends, notwithstanding it has been carried on under great embarrassments during the past year.

At the date of our report last year there were forty-six boys in the school; but before the close of the month of January the number had risen to over sixty, and if we had had accommodations for them the number would probably have reached a hundred, or more: sixty, however, is all we have accommodations for, though there have been sixty-five in the school at one and the same time. To make room for those crowded upon us by the courts, the board were under the necessity of discharging others from the school who had been greatly improved, but who ought, in justice to the school, to have remained much longer.

A considerable number of Senators and members of Congress were invited to visit the school, and gratified us not only in accepting our invitation, but by addressing the boys, and expressing their great satisfaction with the general appearance, orderly deportment, and performances of the boys. They were invited to examine the dormitories, kitchen, dining room, and play-grounds, with all of which much gratification was expressed.

Shortly after this the President of the United States, and other Senators, members of Congress, and a few citizens honored us by visiting the school, witnessing the recitations, and the impromptu examinations of the boys in geography, and other studies during the week. The surprise and pleasure expressed by many of these gentlemen at the readiness and correctness of the answers given to the questions put—questions by no means anticipated—and also at their tidy appearance, quiet behaviour, and pleasant singing—was very gratifying to the superintendent and the board.

It was our wish that every member of Congress should visit the school, that they might judge for themselves of its usefulness, and the efficiency of the system we have adopted for transforming incorrigible, badly brought up boys, into useful men. And we now express the earnest hope that every Senator and member will, during the approaching session of Congress, visit the school, witness the improvements there effected, and the operation of the system.

There is in this, as in every other city in the United States, a large number of boys whose only home is the streets, whose dormitory is the market house, a stable, an out-house, or sometimes the lee side of a wall, or door-step; and others who have parents, but might better, perhaps, be orphans; who, growing up familiar with vice and crime, in which they soon become adepts, should be rescued from the paths that lead down to destruction, and placed as soon as possible under moral and Christian influences, where they can be made happy members of a family, and learn the value of a home.

The greater portion of those who become inmates of the Reform School have never known what a home is; scarcely, indeed, what the word means: if they have, or have had parents, they have never felt the sweet influences of parental care and love, but have been driven and weaned from them by brutal treatment. Need we wonder they wander from what should be their home into the street to seek for such comfort as it may afford, or at least to escape from blows and buffets? In nine cases out of ten, the faults and crimes of the boy have their origin in the greater faults and crimes of the parents, who, instead of governing in love and reflection, only abuse their children in wrath and drunkenness. It is the class of children who supply recruits to "the grand army" of thieves, pickpockets, burglars, robbers, and rogues of every kind who

war upon the community, and send representatives to our jails, penitentiaries, State prisons, and galiows.

The purpose of the Reform School is to lessen, if we cannot entirely cut off, the supply of these recruits. In the same proportion as the prevention of sickness, or evil of any kind, is better than cure, is the importance of preventing the increase, or lessening the number of those who would become criminals. Our plan is to place boys convicted of vagrancy or petty crimes, not in a jail among hardened experts in crime, where they may become proficient, after having had the stigma fixed upon them of being criminals, but to surround them at once with an atmosphere of kindness and affection, to inspire them with self-respect, make them conscious that they are the children of God, that they have souls to save, and duties to perform as human beings; and that they may become respectable and respected men.

Many of these boys are totally ignorant of the existence of a Deity, and only know the name of our Saviour as a word of profanity. Of right and wrong, or conscience, they have scarcely the faintest idea. In stealing, therefore, or committing any other crime for the purpose of supplying themselves with food and clothing, they but follow their animal instincts. True, they know they may be punished, if detected, but they have no conscience to tell them they have done wrong, for they have never been taught moral responsibility; all they fear is punishment, and they have but little apprehension of that.

#### NUMBER OF BOYS IN THE SCHOOL DURING THE YEAR.

It will be seen by the report of the superintendent that we have had in the school during the past year, one hundred and four boys; thirty-eight having been discharged, some by reason of the expiration of the terms for which they were sent to the school, nine to make room for other boys sent to the institution by the courts, and two only as fully reformed.

Many have been sent to the school by the courts for the period of six months. This is but a farce. The school is a *reformatory*, not a *prison* or *penitentiary*. It is to educate, or *reform*, boys, not to *punish* them. And can it be supposed that a boy, such as I have described many of these to be, can be thoroughly reformed in six months? To ask the question is to indicate the only answer to it. If every boy were to be sent there for six months only, the school might as well be abolished at once, as it would be almost wholly useless. The boy sent for that period, instead of feeling the necessity of reforming himself, that he might go out cleansed of his leprosy, and fit to hold up his head proudly among men, would be hourly thinking of the day, drawing nearer and nearer, when he should go out to his old haunts and companions, and enter again on his interrupted career of petty crime, soon, perhaps, to join a higher class of criminals. In the recommendation of the superintendent of the alteration of the law on this subject the board fully concur, and respectfully call your special attention to it.

Instead of one hundred and four inmates of the institution during the year, sixty being the greatest number that can be accommodated at one and the same time, it is to be regretted that we have not the means of accommodating four times that number, which would relieve our cities of their street-corner *infant schools* of vagrant, incorrigible, and malicious boys.



## HOW THE BOYS ARE TREATED AND EMPLOYED.

Upon first coming to the school the boy expects to enter a prison of some kind, and be placed under harsh and severe keepers. With this impression, the kind and parental manner of the superintendent beyond measure puzzles; he is confounded; don't know what to make of it. He sees the boy, whom he now joins, well-dressed, clean, cheerful, happy, and apparently free. But he cannot adapt himself at once to their life and contentment; he thinks, and for a time, perhaps, he seeks to meditate escape; sometimes, though rarely, effects it, and if he does, is soon brought back. Gradually, however, he falls into the ways of the school, labors cheerfully, plays with spirit and zest, becomes more and more docile, and finally begins to perceive the great benefit he is deriving from the school; hope dawns in his mind that he may yet do something better than an outcast; and he resolves to try to do the best he can. Arrived at this stage, he is in a hopeful condition, and it but in the school long enough will leave it, in the end, thoroughly reformed, and prepared to perform the part of a good and useful citizen.

*Kindness and employment* are the effective means of reforming boys. They must first be convinced that, no matter what they have done, or how bad they are, no resentment is felt toward them; that they are not to be punished. The great object is to make the new-comer realize that the whole desire of the superintendent, and all having charge of the school, is to improve him; that he is brought and kept there for his own good, and not to gratify any one's spite. This object once gained, the rest is comparatively easy.

The inmates of the school constitute a family, of which the superintendent, the matron, and their assistants, are the heads. All the forms and usages of a religious family are observed—family prayers, grace before meat, order and propriety of behavior at table, where the superintendent and his wife preside.

Immediately after breakfast a portion of the school are sent into the field, if the weather is fair, to labor till noon; another portion go into the school room to study their lessons, recite, &c. After dinner a short time is allowed for play, and then those in the school room in the morning go to these places with the others, until supper, when they are given further time for recreation, after which, evening prayers and sleep.

Thus the boys are kept constantly employed, and have no time to be idle or idle-headed. They are well clothed and fed, and are taught, and required to observe, cleanliness; and by these means acquire a feeling of respect, which is highly important.

Regular Sabbath schools are held on Sundays, and the boys commit some of the portions of scripture, sing, and go through other exercises, so that when they have kindly visited the school on Sundays; and the board have to thank Dr. Carpenter, the representative of the Young Men's Christian Association, for the deep interest he has manifested in the spiritual welfare of the boys, his constant visits to the school on Sundays, and his earnest and useful labors to further the objects of the board. A report from him of his labors, and of the dispoitment and progress of the school, accompanies this, and is respectfully referred to.

The general improvement of the boys is very manifest to the board and to gentlemen who take interest enough in the institution to visit it occasionally. For this improvement and the great success of the school the board are indebted to the superintendent and his wife, who possess common sense, talents for their position; who make them arduous and responsible duties a labor of love, and whose whole minds and energies

are given to their self-imposed task. They deserve, and will receive, the grateful blessings of those whom they have rescued from a depraved and vicious life. Such services as they have rendered cannot be estimated in money-value, as no money could purchase them.

#### WORK UPON THE FARM—CROPS PRODUCED—IMPROVEMENTS MADE, ETC.

The report of the superintendent of the work done upon the farm, the crops produced and put in, the land cleared, and fences erected, to which we invite your attention, is very gratifying, and, indeed, surprising. It gives us reason to hope that in a year or two the school will be able to produce all the bread and provisions required for the support of the boys; and if there were accommodations for carrying on mechanical work in the winter, the boys could be profitably employed during the winter months, when outdoor work ceases, thus helping still further to defray the expenses of their support. This in-door employment is as essential during the winter, as a means of reform, as out-door labor is in the spring, summer, and autumn. Whether their labor were profitable or not, the boys should never be suffered to be idle. Each one ought to be taught some mechanical trade, that he might hire himself as a journeyman, or set up the business on leaving the school. The idle boy is the devil's journeyman.

#### FAILURE OF APPROPRIATION BY CONGRESS.

You are aware that the bill making an appropriation for the expenses of the school for the current year, for reasons not necessary to refer to—but not because a majority of either House was opposed to it—failed to pass, and the board were left, comparatively, without the means to defray the expenses of the school. In this dilemma the board had to decide whether they would break up the school and turn the sixty-three boys then in it into the street, or send them back to the courts, some to be remanded to prison—the worst place they could be sent—or endeavor to carry on the school, in the best way they could, until relief could be obtained from Congress. To break up the school for a month or six months would be to destroy it altogether. This the board would not do if it were possible to carry it on. On being apprised of our dilemma several liberal-minded gentlemen, whose names we take pleasure in mentioning, generously offered to supply the school with such articles necessary for its support as they dealt in, and wait until Congress shall make an appropriation. These gentlemen are Mr. N. W. Burchell, Messrs. Hall & Hume, Wheatley & Brother, William Ballantyne, H. W. Fisher, G. T. Dunlop, E. F. Simpson, William R. Riley, George Ryneal, Webb & Beveridge, Robert Ball, Daniel Simkins, and J. L. Savage.

To each of these gentlemen the board avail themselves of this opportunity to express their thanks. To Mr. H. D. Cooke the board also desire to express their appreciation of his permission to the superintendent to draw on him for funds necessary for incidental expenses, without having any on deposit. These generous acts have enabled the board to keep the school in successful operation through all their embarrassments.

The board had hoped to have obtained from the city of Washington the amount due by the city, \$3,345 80, for the support of boys sent to the school prior to the change of government, and \$1,031 08 which has accrued since that change. But they regret to say that not a dollar has *been paid* by the city since the school went into operation. Without an

early appropriation by Congress, the board will be compelled to abandon the school.

#### HEALTH AND LOCATION.

The board regret to be compelled to report that much sickness has prevailed at the school during the usual malarial season. It is true no deaths have occurred; but they attribute this to the judicious management and prompt attention to each case of malarial fever by the superintendent, who, fortunately, has heretofore had much experience in diseases of this kind.

In locating the buildings for such an institution, salubrity and healthfulness should be the first inquiry, as they are of the very first importance. With the past year's experience before them the board most respectfully recommend that a new location be obtained, combining good soil, purity of air, and an abundance of good water. That portion of the Government farm at present occupied by the Reform School, and not needed for aqueduct purposes, might be sold, and with the proceeds and some additional funds a more suitable place could be purchased. For further information on this subject reference is respectfully made to the accompanying report of the physician to the school, Dr. Tyler.

In view of the great benefits which this community must derive from an institution of this kind, and also of those which must result from it as a model national institution, the board cannot but indulge an earnest hope that Congress will make provision for defraying the expenses of the school, and also for erecting buildings for it suitable to accommodate at least three hundred boys.

I have the honor to be, your obedient servant,

N. SARGENT.

*President of the Board of Trustees of the Reform School.*

Hon. COLUMBUS DELANO,

*Secretary of the Interior.*

#### REPORT OF THE WARDEN OF THE UNITED STATES JAIL.

##### WARDEN'S OFFICE, UNITED STATES JAIL.

*Washington, D. C., October 31, 1871.*

SIR: In compliance with an act of Congress approved February 29, 1861, I herewith submit my annual report as warden of the United States jail in the District of Columbia, for the year ending October 31, 1871.

I believe it to be my duty to make another effort to attract the attention of the Government to the great necessity which exists for a new jail in the District of Columbia. The building now in use is old and worn, and in point of strength, capacity, accommodations, and general arrangements, is scarcely suitable for the purposes to which it is devoted. It was built a generation ago, and previous to the dawn of the more humanitarian system of treatment of prisoners now generally approved, and its construction and general arrangements are not, therefore, in accord with the ideas of the present age. It is deficient in capacity. The growth of population in this District, and the consequent increase of the number of persons committed to the jail since it was built, have rendered the accommodations far too limited, and hence a constant overcrowding has become an evil which cannot be avoided. Besides, the arrangement of the building affords no opportunity for solitary confinement or the classification of prisoners beyond that of

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There is a want of proper means of ventilation in the cells and apartments, which is a serious obstacle to overcome, to secure the health and comfort of the inmates; besides, there are no water-closet accommodations in the building, nor are the cells or rooms connected in any manner with a sewer; hence each cell and room is, from necessity, furnished with night-tubs, in which the offensive excretions of the occupants are concentrated, and often necessarily retained several hours, giving forth their foul and nauseous gases to an extent which is not only disagreeable and offensive, but is calculated to depress the vital powers and generate disease. This evil I have endeavored to overcome by neutralization, through the use of disinfectants and the daily application of lime throughout the building, and whitewashing the cells and corridors. This method has proved of great value, and has accomplished the object desired to a considerable extent. Again, the building is faulty in point of construction and material; it is built of brick and mortar of poor quality. The mortar is not hard and substantial, but is of a crumbling nature, and does not adhere properly to the brick. Hence the penetration of the walls is made an easy matter, and the building itself really presents no reliable obstacle to prevent the escape of burglars and desperate characters, of whom there are constantly more or less incarcerated in it; consequently, a greater number of guards is required than would otherwise be necessary to prevent the escape of prisoners. This considerably increases the annual expenses of the institution, and compels me to rely more upon the unceasing watchfulness of the guards for the safe-keeping of prisoners than upon the strength of the building.

The jail has been kept in repair so far as was necessary to preserve the building and render it serviceable, and a system of habitual cleanliness throughout the entire structure and premises has been vigilantly pursued during the year. It is now in as good condition in all respects as can reasonably be expected under the circumstances above enumerated; but to obviate the manifold objections to the present building, a new structure with the modern improvements and greater capacity and strength has become extremely desirable, if not absolutely indispensable.

In 1867 and 1868 escapes from the jail had become so frequent, and the prisoners so disorderly, as to attract the attention of the honorable Secretary of the Interior, who authorized my predecessor to appoint an additional number of guards to prevent such escapes, and also to so govern and control the prisoners as to prevent them from disturbing the peace and quiet of respectable citizens residing in the vicinity. The increased number of guards was continued until the past year. I reduced the number by abating two of the positions, and hope to be able to conduct the institution with the present reduced force.

I am gratified to be able to express my great indebtedness to Benton Russ, the deputy warden, and to each of the officers of the jail, for the prompt and faithful discharge of duties imposed, and the effective manner in which the rules for governing the institution have been carried into execution. Through their vigilance, good discipline has been uniformly maintained, and I have no escapes of prisoners to report during the year just closed.

The sanitary condition of the jail has been very gratifying; there has been but little sickness among the inmates—less, I believe, in proportion than among the citizens at large, and under the skillful treatment of Dr. Noble Young, the physician to the jail, those who were sick have *been carefully attended*, and for the most part restored to health. For

a more detailed statement in regard to the sanitary condition of the jail and the health and condition of prisoners, your attention is respectfully called to the accompanying report of Dr. Noble Young, the physician to the jail.

No death from disease has occurred during the year.

The prisoners have been plentifully supplied with wholesome food of good quality, which was uniformly inspected by one of the officers of the jail before being received for use. The food has been carefully prepared by competent cooks employed for the purpose, and who also distribute the rations to the prisoners under the directions of one of the guards. We have no dining-room or other place where the prisoners can be assembled for their meals, and consequently the rations are necessarily delivered to the prisoners in the several corridors and rooms of the jail. The sick have been supplied with such rations, delicacies, and medicines as the physician to the jail has prescribed, and their condition appeared to require.

Religious services have been held regularly every Sunday. The Rev. Father Walter has been the spiritual instructor of the Catholic portion; the Protestant exercises have been conducted under the auspices of the Young Men's Christian Association of this city. Much good has been accomplished thereby.

Clothing has been furnished to those only who were destitute and had no means of procuring it themselves, and to such only a sufficient supply for their immediate wants. Each prisoner is furnished with a clean straw bed and a sufficient number of blankets for comfort, according to the season, and which have been kept clean and in good condition, and the straw frequently changed.

The entire expenditures on account of the jail during the year, exclusive of salaries, and including the cost of transportation of prisoners to Albany penitentiary and repairs, amount to \$15,758 62, which is much less than for many years. The expenditures have been as follows:

Subsistence of prisoners .....	\$9,196 20
Medicines and delicacies for the sick .....	1 22 04
Fuel and lights .....	1,004 06
Stationery, blanks, and blank-books .....	163 97
Hard and tin ware .....	1 77 00
Repairs .....	909 75
Lime and disinfectants .....	121 35
Beds, bedding, and clothing .....	1,597 75
Transportation of prisoners to Albany penitentiary .....	1,516 02
Horse-feed .....	195 13
Night-tubs and wooden-ware .....	86 35
<b>Total .....</b>	<b>15,758 62</b>

The salaries of the guards, physician, and employes for the year amount to \$23,723 99. The entire expenses are \$4,109 06 less than last year.

The daily average number of prisoners confined in the jail during the year was 124.

There were in jail at the commencement of the year—

Males .....	109
Females .....	14

Received during the year—

Males .....	1,151
Females .....	184

**Total number in jail during the year .....** **1,260**

Of whom there are now in jail—males, 73; females, 10. \*

Sent to penitentiary at Albany, New York—males, 34; females, 5.

Sent to reform school, District of Columbia—males, 40.

Executed—1 male.

Released—males, 1,112; females, 183.

Those received during the year were charged with offenses as follows:

	Male.	Female.
Murder .....	6	2
Accessory to murder .....	1	1
Rape .....	1	..
Burglary .....	5	..
Grand larceny .....	34	10
Riot .....	4	..
Affray .....	15	1
Assault with intent to kill .....	41	1
Robbing mail .....	1	1
Bigamy .....	1	..
Robbery .....	15	..
Arson .....	7	..
Forgery .....	5	1
Embezzlement .....	4	..
Perjury .....	2	..
Horse-stealing .....	3	..
Breach of the peace .....	16	1
Receiving stolen goods .....	..	..
Obtaining goods under false pretenses .....	4	..
Attempt to poison .....	..	3
Illegal registration .....	4	..
Illegally attempting to vote .....	1	..
Petty larceny .....	535	74
Assault .....	207	31
Assault and battery .....	76	12
Resisting police officers .....	34	..
Committed on bench warrants .....	2	2
Keeping bawdy-house .....	1	14
Keeping disorderly house .....	7	2
Prostitution .....	..	6
Indecent language .....	2	..
Profanity .....	1	2
Disorderly conduct .....	6	2
Contempt of court .....	15	4
Mahonous mischief .....	3	..
Falsely personating a police officer .....	1	..
Fugitives from justice .....	9	..
Forcing a toll-bridge .....	3	..
Fishing in Potomac River .....	2	..
Obstructing trespass .....	20	..
Committed as witnesses .....	4	..

Of the above there were convicted and sentenced 760 males and 126 females, for crimes which are classified as follows:

	Male.	Female.
Murder .....	2	..
Burglary .....	2	..
Grand larceny .....	27	..
Assault with intent to kill .....	1	..
Robbing mail .....	..	1
Arson .....	1	..
Assault .....	7	1
Breach of the peace .....	17	1
Receiving stolen goods .....	..	1
Obtaining goods under false pretenses .....	3	..
Attempt to poison .....	..	1
Illegal registration .....	1	..
Illegally attempting to vote .....	1	..
Petty larceny .....	374	52
Assault .....	190	31
Assault and battery .....	49	10

	Male.	Female.
Resisting police officers.....	35	..
Keeping a disorderly house.....	..	13
Keeping a disorderly house.....	2	..
Prostitution.....	..	3
Enticing prostitution.....	..	5
Indecent language.....	5	..
Insolence and contempt of court.....	..	2
Disorderly conduct.....	13	..
Contempt of court.....	13	4
Forcing a toll-bridge.....	3	..
Malicious trespass.....	16	..

Of those convicted and sentenced as above stated, there were—

Sent to the penitentiary at Albany, New York.....	34	5
Sent to the reform school of the District of Columbia.....	40	..
Sentenced to Albany penitentiary, and pardoned by the President of the United States.....	2	..
Executed.....	1	..
New trial granted.....	1	..

and the remainder were sentenced to imprisonment in this jail.

Very respectfully, your obedient servant,

JOHN S. CROCKER,  
Warden.

Hon. C. DELANO,

Secretary of the Interior.

## REPORT OF THE BOARD OF METROPOLITAN POLICE.

DEPARTMENT OF METROPOLITAN POLICE,  
OFFICE OF THE BOARD, No. 482 LOUISIANA AVENUE,  
Washington, D. C., October 16, 1871.

To the Honorable SECRETARY OF THE INTERIOR:

In accordance with the twenty-fourth section of the act of Congress entitled "An act to create a Metropolitan Police district of the District of Columbia, and to establish a police therefor," approved August 6, 1861, the Board of Police of the said District respectfully submit their tenth annual report of the condition of the police for the year ending September 30, 1871.

This force was organized and went into operation under the above-named act on the 11th day of September, 1861, and has consequently been in existence upward of ten years. Disloyalty on the part of the former force, want of satisfactory and effective police service, arising from the several distinct police organizations within the District, and prevalent lawlessness in our midst at that time, called the present force into being. Each of the above-named delinquencies arose from the partisan character of the service. Experience has demonstrated that, in all large cities, a police force organized under municipal regulations inevitably becomes partisan and inefficient, a result which must necessarily follow when men are selected on account of partisan service in the political contests of their localities. As a rule, effective ward politicians make very poor policemen. To avoid the appointment of inefficient men, and to remove the force as far as practicable from partisan influences in the discharge of their duties, has been the constant effort of the board. That they have succeeded in this purpose to a satisfactory degree, is believed. To have been loyal to our Government dur-

Of whom there are now in jail—males, 73; females, 10. •  
 Sent to penitentiary at Albany, New York—males, 34; females, 5.  
 Sent to reform school, District of Columbia—males, 40.  
 Executed—1 male.  
 Released—males, 1,112; females, 183.  
 Those received during the year were charged with offenses as follows:

	Male.	Female.
Murder .....	8	2
Accessory to murder.....	1	1
Rape .....	1	..
Burglary.....	8	..
Grand larceny.....	54	16
Riot .....	4	..
Affray .....	15	1
Assault with intent to kill.....	41	1
Robbing mail.....	..	1
Bigamy.....	1	..
Robbery .....	15	..
Arson.....	7	..
Forgery.....	8	1
Embezzlement.....	4	..
Perjury .....	2	..
House-stealing .....	3	..
Breach of the peace .....	16	1
Receiving stolen goods.....	..	..
Obtaining goods under false pretenses.....	4	..
Attempt to poison.....	..	3
Illegal registration .....	4	..
Illegally attempting to vote.....	1	..
Petit larceny.....	535	74
Assault .....	207	31
Assault and battery.....	76	12
Resisting police officers.....	34	..
Committed on bench warrants .....	28	2
Keeping bawdy-house.....	1	14
Keeping disorderly house .....	7	2
Prostitution.....	..	6
Indecent language .....	2	..
Profanity .....	1	2
Disorderly conduct.....	6	2
Contempt of court .....	15	4
Malicious mischief .....	3	..
Falsely personating a police officer .....	1	..
Fugitives from justice .....	9	..
Forcing a toll-bridge .....	3	..
Bathing in Potomac River .....	2	..
Malicious trespass .....	20	..
Committed as witnesses .....	4	5

Of the above there were convicted and sentenced 760 males, and 136 females, for crimes which are classified as follows:

	Male.	Female.
Murder .....	2	..
Burglary .....	2	..
Grand larceny.....	23	5
Assault with intent to kill.....	1	..
Robbing mail.....	..	1
Bigamy.....	1	..
Affray .....	8	1
Breach of peace.....	15	1
Receiving stolen goods.....	..	1
Obtaining goods under false pretenses.....	3	..
Attempt to poison.....	..	1
Illegal registration .....	1	..
Illegally attempting to vote .....	1	..
Petit larceny.....	374	58
Assault .....	190	31
Assault and battery.....	49	10



	Male.	Female.
Resisting police officers.....	35	..
Keeping bawdy-house.....	..	13
Keeping disorderly house.....	2	..
Prostitution.....	..	3
Enticing prostitution.....	..	5
Indecent language.....	5	..
Profanity and contempt of court.....	..	2
Disorderly conduct.....	13	..
Contempt of court.....	13	4
Forcing a toll-bridge.....	3	..
Malicious trespass.....	16	..

Of those convicted and sentenced as above stated, there were—

Sent to the penitentiary at Albany, New York.....	34	5
Sent to the reform school of the District of Columbia.....	40	..
Sentenced to Albany penitentiary, and pardoned by the President of the United States.....	2	..
Executed.....	1	..
New trial granted.....	1	..

and the remainder were sentenced to imprisonment in this jail.

Very respectfully, your obedient servant,

JOHN S. CROCKER,  
Warden.

HON. C. DELANO,  
Secretary of the Interior.

## REPORT OF THE BOARD OF METROPOLITAN POLICE.

DEPARTMENT OF METROPOLITAN POLICE,  
OFFICE OF THE BOARD, No. 482 LOUISIANA AVENUE,  
Washington, D. C., October 16, 1871.

To the Honorable SECRETARY OF THE INTERIOR:

In accordance with the twenty-fourth section of the act of Congress entitled "An act to create a Metropolitan Police district of the District of Columbia, and to establish a police therefor," approved August 6, 1861, the Board of Police of the said District respectfully submit their tenth annual report of the condition of the police for the year ending September 30, 1871.

This force was organized and went into operation under the above-named act on the 11th day of September, 1861, and has consequently been in existence upward of ten years. Disloyalty on the part of the former force, want of satisfactory and effective police service, arising from the several distinct police organizations within the District, and prevalent lawlessness in our midst at that time, called the present force into being. Each of the above-named delinquencies arose from the partisan character of the service. Experience has demonstrated that, in all large cities, a police force organized under municipal regulations inevitably becomes partisan and inefficient, a result which must necessarily follow when men are selected on account of partisan service in the political contests of their localities. As a rule, effective ward politicians make very poor policemen. To avoid the appointment of inefficient men, and to remove the force as far as practicable from partisan influences in the discharge of their duties, has been the constant effort of the board. That they have succeeded in this purpose to a satisfactory degree, is believed. To have been loyal to our Government during the

late rebellion has been the only political qualification required of an applicant for appointment upon the force. With few exceptions, the force consists of good men, who aim at a faithful discharge of duty; that every member of the force is not so, does not result from a lack of a studied and persistent effort to secure such men.

The physical condition, intelligence, habits, temper, and aptitude for police duty are the general qualifications examined into before selections are made for appointment upon the force. In order that the board may be satisfied upon these points, the applicant is required to produce a petition, signed by at least five respectable citizens, stating that they have been personally well acquainted with the candidate for at least two years; that he is "a man of good moral character, correct and orderly in his deportment, and not in any respect a violator of law or good order; that he is a man of sober, temperate, and industrious habits; that he is not addicted to the habitual use of intoxicating drink, or other hurtful excesses." One of the signers to the petition for appointment is required to make an affidavit, in due form, to the truthfulness of the statement contained in the petition, and each signer pledges himself to make a similar affidavit if called upon to do so. The applicant is then subjected to a thorough examination by the board of surgeons as to his physical qualifications; if he is passed favorably upon by the surgeons, he is then required to appear before a committee of the board of police for inspection, and to answer, under oath, such questions as the committee see fit to propound; a record of the questions and answers is kept and filed. If the general appearance and intelligence of the applicant are favorable, and he has answered the questions propounded to him favorably, his name is then furnished to the major and superintendent, who, with the captain and inspector, make diligent inquiry regarding his moral character, general reputation, and associates. If the reports of these officers are favorable, the applicant may be appointed for a trial or probationary period of sixty days; and if, at the end of this probation, the appointee deports himself properly, and develops an aptitude to the performance of police duty, he is regularly commissioned as a member of the force.

The above is a brief summary of the precautions taken to secure worthy and efficient police officers. The efficiency with which the force has performed its duty will appear from the annual statistics of its operations, together with the comparative freedom of our community from disorder and crime.

#### THE FORCE.

The regular force, as at present constituted, consists of 238 men, as follows, viz:

Major and superintendent.....	1
Captain and inspector.....	1
Lieutenants.....	10
Sergeants.....	20
Privates or patrolmen.....	200
Detectives.....	6
Total.....	238

There are also in the employment of the board, under authority of law, the following officers, viz:

Secretary of the board.....	1
Property clerk.....	1
Clerks.....	3
Surgeons.....	3
Messengers.....	2

The board has also commissioned, as provided by law, 37 persons as additional privates, to do duty at various localities, at the expense of the parties making application for their appointment.

#### DISPOSITION OF THE FORCE.

At the central office, with duties extending throughout the entire District, the following officers are assigned, viz:

The major and superintendent .....	1
The captain and inspector .....	1
One lieutenant in charge and six detectives.....	7
One lieutenant in charge and ten sanitary officers.....	11

For more perfect and thorough police surveillance, the District is divided into eight precincts, to each of which is assigned a lieutenant, sergeants, and privates, as follows:

First precinct.—One lieutenant, three sergeants, and twenty-two privates.....	26
Second precinct.—One lieutenant, one sergeant, and twenty-one privates.....	23
Third precinct.—One lieutenant, two sergeants, and twenty-one privates.....	24
Fourth precinct.—One lieutenant, three sergeants, and twenty-one privates.....	25
Fifth precinct.—One lieutenant, three sergeants, and twenty-seven privates.....	31
Sixth precinct.—One lieutenant, two sergeants, and twenty-two privates.....	25
Seventh precinct.—One lieutenant, three sergeants, and thirty privates.....	34
Eighth precinct.—One lieutenant, three sergeants, and twenty-six privates.....	30

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#### INCREASE OF THE FORCE.

An increase of the number of the present force is absolutely required in order to perform effectively the duties devolving upon them. The population of the District is rapidly increasing and extending to hitherto unsettled districts. The population of Washington is fully one-third greater than when the present number of the force was authorized. With the present number a single policeman has from ten to twenty blocks or squares to patrol in many portions of the city, requiring a walk of between three and four miles in making one circuit of his beat. Under such circumstances it is not remarkable that depredations are committed, and the wonder is that many more complaints are not made than really occur.

To meet the present and immediate prospective wants of the service in this regard, an increase of the force to the extent of sixteen sergeants and fifty privates, or patrolmen, is earnestly recommended.

#### STATION-HOUSES.

There is a pressing need for several new station-houses. No additional accommodations of this kind have been provided since the last annual report. The efficiency of the force would be materially increased were there proper provisions for the comfort and health of the men at their respective stations. The sick-list would also largely diminish if upon relief from street-patrol duty after hours of exposure during inclement weather, warm and comfortable rooms were provided for the patrolmen.

There are, however, good reasons for anticipating relief in this respect when the District government shall have this subject fully presented to it for consideration.

#### DISCIPLINE OF THE FORCE.

In the enforcement of discipline and efficiency on the part of

charges have been preferred and trials accorded by the board in 92 cases resulting as follows, viz:

Privates dismissed the force .....	20
Privates reprimanded .....	16
Sergeants reprimanded .....	1
Fines imposed upon privates .....	6
Sergeants reduced to the ranks .....	1
Complaints against privates dismissed .....	45
Complaints against sergeants dismissed .....	2
Dropped from the rolls after a probationary trial of sixty days .....	1
	<hr/> 92 <hr/>

#### LICENSES FOR THE SALE OF INTOXICATING LIQUORS.

There have been presented for the approval of the board 351 licenses to retail intoxicating liquors. Of this number 325 received the approval of the board and 26 were disapproved. Of the whole number presented for approval 308 were from Washington; 37 from Georgetown; and 6 from the county of Washington outside the two cities. Of the number approved, 284 were from Washington, 35 from Georgetown, and 6 from the county. The number applying for approval is 20 less than last year, and the number approved is 31 more than last year.

The board again recommends that legal provisions be made for more summary proceedings against persons who engage in the illicit sale of intoxicating liquors. The punishment of persons engaged in this pernicious traffic is seldom reached through the ordinary proceedings of our courts. Nothing less than a seizure and destruction of liquors kept for illegal sale, and the closing of the house where it is carried on, will effectually suppress this traffic.

#### POLICE TELEGRAPH.

There have been transmitted by the police telegraph 24,616 messages, of which a record has been kept at the central office; beside probably an equal number which have been passed between different police stations of which no record has been made. Through the agency of this telegraph 154 lost children have been restored to their parents; 185 estrayed or stolen animals have been recovered; 74 vehicles have been similarly disposed of; 577 dead animals have been reported to the sanitary police; 24 alarms of fire have been given; and the coroner has been notified that his services were needed in 57 cases. It is the intention of the board to place new and improved instruments in the several stations in the place of those now in use, which have become very much impaired from constant use. The manufacturer has the new instruments nearly completed, and it is expected they will be ready for use within a few weeks.

#### DETECTIVE CORPS.

The following is a summary of such of the operations of the detective corps as can be made a matter of record. The greater portion of their work is of such a nature that it cannot be made to appear in a report of their duties performed:

Number of robberies reported .....	361
Number of arrests made .....	206
Amount of property reported lost or stolen .....	\$25,790 29
Amount of property recovered .....	13,948 78
Amount of property turned over to property clerk .....	7,759 05
Amount of property taken from persons and returned to same .....	7,040 76
Amount of property turned over to owners .....	6,188 73

In addition to the amount of lost or stolen property reported above as recovered by the detectives, \$8,144 35 were recovered by precinct officers, and \$10,020 were recovered by the owners.\*

For a statement of the operations of the force in detail, reference is made to the documents appended hereto, viz:

1. Report of the major and superintendent.
2. Report of Lieutenant Noonan, in charge of sanitary company.
3. Treasurer's report.
4. Property clerk's report.
5. Report of board of surgeons.

I have the honor to be, sir, very respectfully, your obedient servant,

WM. J. MURTAGH,  
*President of the Board.*

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DEPARTMENT OF METROPOLITAN POLICE,  
OFFICE OF MAJOR AND SUPERINTENDENT.  
*Washington, D. C., October 16, 1871.*

GENTLEMEN: I herewith respectfully submit my report of the operations of the police force for the year ending September 30, 1871, comprising such statistical and tabular information as is required by law.

A. C. RICHARDS,  
*Major and Superintendent.*

The Hon. BOARD OF METROPOLITAN POLICE COMMISSIONERS.

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\* Large amounts of money and property have been recovered, the loss of which was never reported.

# REPORT

## OF

### THE POSTMASTER GENERAL.

POST-OFFICE DEPARTMENT,  
Washington, D. C., November 18, 1871.

**SIR:** The ordinary revenues of this Department for the fiscal year ended June 30, 1871, were \$20,037,045 42, and the expenditures of all kinds \$24,390,104 08. For the year ended June 30, 1870, the ordinary revenues (not including the amount of money-order funds deposited as postal receipts for convenience of transfer) were \$18,879,377 65; and the expenditures (not including the amount of money-order funds re-transferred) were \$23,348,837 63. The increase of revenue for the year 1871 over the year 1870 was \$1,157,667 77, or 6.13 per cent., and the increase of expenditures \$1,041,266 45, or 4.45 per cent., showing a net increase in revenue of \$116,401 32. The increase in revenue for the year 1871 over the year 1869 was \$2,722,869 70, or 15.72 per cent., and the increase of expenditures for 1871 over 1869 was \$1,251,972 58, or 5.41 per cent. The increase in revenue for 1871, compared with 1870, was less than the increase for 1870, compared with 1869, by \$270,042 16; and the increase of expenditures for 1871, compared with 1870, was greater than the increase for 1870, compared with 1869, by \$740,590 32.

If, in addition to the ordinary revenues, the Department be credited with \$700,000 appropriated for transportation of free matter and the amounts drawn and expended for subsidies to steamship lines, it will appear that the deficiency provided out of the general Treasury for the year 1871 is \$2,928,058 66, against \$2,814,116 98 for the year 1870.

The accompanying report of the Auditor fully sets forth the details of the financial operations of the Department.

The estimated expenditures for the year ending June 30, 1873, are.....	\$27,489,750 00
The revenues, estimated at 10 per cent. increase over last year.....	\$22,040,749 00
Standing appropriations for free matter .....	700,000 00
	<u>22,740,749 00</u>
Leaving a deficiency of .....	<u>4,749,001 00</u>

The foregoing estimates do not include the following special appropriations in the nature of subsidies:

For mail steamship service between San Francisco and Japan and China	\$500,000 00
For like service between the United States and Brazil.....	150,000 00
For like service between San Francisco and Sandwich Islands.....	75,000 00
Total .....	<u><u>725,000 00</u></u>

Of the deficiency appropriated for the year 1870 there was unexpended at the close of that year the sum of..... \$4,740,000 00  
 Amount appropriated for deficiency in 1871..... 4,685,032 00

A total of..... 9,425,032 00  
 There were drawn during the last fiscal year of the amount unexpended at the close of the year 1870 for payments on account of that year..... \$1,050,000 00  
 Of the amount appropriated for the year 1871..... 1,650,000 00

A total of..... 2,700,000 00

Leaving in the Treasury, unexpended, the sum of..... 6,725,032 00

Against which there are chargeable sundry unliquidated accounts, estimated as follows:

Excess of expenditures over receipts during year just closed..... \$236,858 66  
 For balances to foreign countries..... 275,000 00  
 For mail service under contract and recognized, but not yet reported..... 527,867 95  
 Mail service still unrecognized..... 249,195 00

1,272,921 61

Leaving, after settlement of all liabilities to June 30, 1871, a net balance of deficiency appropriations of..... 5,446,110 39

The number of adhesive postage-stamps issued during the year was 428,126,175, representing..... \$14,630,715 00  
 Stamped envelopes, plain, 49,954,625, representing..... 1,432,474 75  
 Stamped envelopes, "request," 48,111,650, representing..... 1,434,181 50  
 Newspaper wrappers, 6,029,000, representing..... 132,180 00

The whole number of stamps, envelopes, and newspaper wrappers was 602,601,450, of the aggregate value of..... 17,629,551 25

The increase in the issue of stamps, stamped envelopes, and newspaper wrappers is best exhibited by the following table:

Description.	Fiscal year ended June 30, 1870.	Fiscal year ended June 30, 1871.	Increase, amount.	Increase, per cent.
Adhesive postage-stamps.....	\$13,976,761 00	\$14,630,715 00	\$653,947 00	4.67
Stamped envelopes, plain.....	1,297,150 00	1,432,474 75	135,315 75	10.43
Stamped envelopes, request.....	1,084,250 00	1,434,181 50	349,931 50	32.27
Newspaper wrappers.....	28,605 00	132,180 00	103,575 00	36.05
Aggregate.....	16,456,766 00	17,629,551 25	1,172,785 25	7.13

The number of packages of postage-stamps lost in the mails during the year was six, representing \$258; and of stamped envelopes three, representing \$51 70; being much less than the losses from similar delinquencies in 1870 and previous years.

## CONTRACTS—TRANSPORTATION STATISTICS.

There were in the service of the Department on the 30th June, 1871, 7,286 contractors for the transportation of the mails.

Of mail routes in operation there were 8,951, aggregating in length (exclusive of special routes) 238,359 miles, in annual transportation 107,572,794 miles, and in annual cost \$11,529,395. Adding the compensation of railway post-office clerks, route-agents, local agents, mail-messengers, mail-route messengers, and baggage-masters in charge of registered passages, amounting to \$1,875,526, the aggregate annual cost was \$13,404,921.

The service was divided as follows:

Railroad routes: Length, 49,834 miles; annual transportation, 55,557,048 miles; annual cost, \$5,724,979—about 10.30 cents per mile.

Steamboat routes: Length, 20,334 miles; annual transportation, 4,684,778 miles; annual cost, \$776,943—about 16.58 cents per mile.

Other routes, on which the mails are required to be conveyed with "celerity, certainty, and security:" Length, 168,191 miles; annual transportation, 47,330,968 miles; annual cost, \$5,027,473—about 10.62 cents per mile.

There was an increase over the preceding year in length of routes of 7,127 miles, in annual transportation 10,547,798 miles, and in cost \$644,742. Adding the increased cost for railway post-office clerks, route, local, and other agents, \$404,636, the total increase in cost was \$1,049,378.

The foregoing statements of distances and costs do not include service for "special" offices. There were at the close of the year 2,115 of these, each with a mail-carrier whose pay from the Department is not allowed to exceed the net postal yield of the office. "Special" routes and their carriers are included, however, in the number of contractors and routes as given above.

The new railroad routes put in operation during the year 1871 amounted to 6,107 miles; during 1870, to 4,190 miles; and during 1869, to 3,519 miles—making in the aggregate an addition in three years of 13,816 miles to the 36,018 miles in operation on July 1, 1868. The increase in three years exceeds 38 per cent., and in the last year alone it reached the unparalleled proportion of 17 per cent

## READJUSTMENT OF PAY ON RAILROAD ROUTES.

The regular four-years term of contracts for the transportation of mails in the States of West Virginia, Virginia, North Carolina, South Carolina, Georgia, Florida, Alabama, Mississippi, Louisiana, Texas, and Arkansas expired June 30, 1871. In anticipation of the close of the term, returns of the amount and character of the mail service performed on railroad routes in those States were obtained, as a basis for the readjustment of the rates of compensation for the new term commencing July 1, 1871. These returns, with those from a num-



ber of routes in other States, are presented in Table E, hereto appended, from the office of the Second Assistant Postmaster General. The readjustment founded upon these returns, and also the adjustment of rates on certain new routes, are exhibited in Table F. The rates were increased on fifty routes, and decreased on nine, the net excess of the present over the former amount of annual pay being \$205,448 87. Table F embraces ninety-five routes in all, of which thirty-six are new.

In both my former reports I have advocated a revision and readjustment of the rates of compensation for the transportation of mails on railroads, but as yet no effective action has been taken by Congress. The Department continues to encounter many annoying difficulties in its efforts to secure a rapid transmission of the mails, particularly those containing newspapers, to the South and West, owing to complaints by the managers of railroads of the inadequacy of their pay, and their refusal to allow the use of their fastest trains and most commodious mail-cars. It is important to the service that this long-pending controversy should be settled, and hence I again renew my recommendation that the act of 3d March, 1845, be so amended as to allow a fair and reasonable increase of the compensation of railroad companies, upon condition that they shall enter into contract with the Department for the prompt and faithful performance of their duties.

#### POST-ROUTE MAPS.

The work on the preparation and publication of the series of post-route maps of the United States has been continued during the past year under the supervision of the topographer of the Department. Six maps in all, comprising fifteen sheets, on a large scale, are now completed, embracing the northern tier of States, from Maine to Wisconsin. These maps are in constant demand, as brought up in successive editions, to be furnished, when considered requisite, to postmasters and other agents of the Department. They are also furnished to members of Congress, for their convenience in correspondence with their constituents and with the Department. During the past year the double-sheet map of the States of Michigan and Wisconsin has been completed by the engraver. The compilation and engraving of a map, in four sheets, of the States of Illinois, Iowa, and Missouri are being pushed forward as fast as the peculiar nature of the work, involving the great and rapid changes and extension of the mail service in that region, will allow.

I renew my previous recommendation that an effort be made to secure some more precise and correct system of survey than now exists in some of the Middle and Southern States.

#### FINES AND DEDUCTIONS.

The amount of fines imposed upon contractors, and deductions made from their pay, on account of failures and other delinquencies, for the

ast year, was \$75,256 71, and the amount remitted during the same period was \$10,076 94, leaving the net amount of fines and deductions \$65,179 77, as will appear by the following recapitulation :

Amount of fines .....	\$4,132 02
Amount of deductions .....	71,124 69
Total .....	75,256 71
Amount remitted .....	10,076 94
Net amount.....	<u>65,179 77</u>

#### MAIL-BAGS, LOCKS, AND KEYS.

A table appended to this report exhibits in detail the number, description, and cost of mail-bags, locks, and keys purchased and issued during the year. The total number of new mail-bags procured and put in service was 60,400, of which 54,000 were used for transmission of printed matter, and 6,400 for letter-mails. Their cost was \$86,015. Contracts for furnishing mail-bags of all kinds were made during the year, according to law, after due advertisement, at prices averaging about 18 per cent. less than the last contracts for similar articles.

The necessity of substituting new kinds of mail-locks and keys for those formerly in use demanded very large purchases during the year. The number of locks of the new kinds purchased was 100,000, and of keys 63,000, at a cost of \$68,190. Adding \$1,273 40, the cost of repairs, the total expenditures are shown to be \$69,463 40.

#### THROUGH MAILS.

Tables accompany the report of the Second Assistant Postmaster General, giving interesting details relative to the transmission of through mails from Washington, New York, Boston, Cincinnati, Chicago, and St. Louis to San Francisco and back; from Washington to New Orleans and back; from New York to New Orleans and back, by different routes; and from New York to Memphis and back, by different routes.

On the route to San Francisco and back, the gratifying regularity noted in the last annual report has been fully maintained. Of 644 mails carried through, during the year ended with the month of September, 1871, to San Francisco from New York, 569 were conveyed in schedule time, and only 75 behind time, against 573 in time and 145 behind time the preceding year. Of 364 mails carried through to New York from San Francisco, 321 were conveyed in schedule time, and only 43 behind time, against 280 in time and 72 behind time the preceding year. The average time, going west, was 173 hours, or 7 days, 5 hours—nearly 3 hours less than the average the preceding year. The average time, going east, was 169 hours, 45 minutes, or 7 days, 1 hour, and 45 minutes—nearly 3 hours less than the average the preceding year. The shortest time, going west, was 162 hours; going east, 167 hours; against 144

hours, 40 minutes, going west, and 159 hours, 10 minutes, going east, the preceding year.

Between New York and New Orleans, one mail a day is still sent in each direction over the *Southwestern* route, *via* Washington, Lynchburgh, Knoxville, Chattanooga, and Grand Junction, and one over the *Western* route, *via* Cincinnati, Louisville, Humboldt, and Grand Junction, at which last-mentioned point the two routes unite and run on the same road to New Orleans. Of 357 mails carried through, during the year ended with the month of September, 1871, by the *Southwestern* route, to New Orleans from New York, 236 were conveyed in schedule time, and 121 behind time, against 214 in time and 149 behind time the preceding year; the average time being 93 hours, 9 minutes—29 minutes more than the average the preceding year. Of 357 mails carried through, by the same route, to New York from New Orleans, 224 were conveyed in schedule time, and 133 behind time, against 221 in time and 142 behind time the preceding year; the average time being 95 hours, 30 minutes—54 minutes less than the average the preceding year. The shortest time, going south, was 85 hours, 29 minutes; going north, 85 hours; against 84 hours, 54 minutes, going south, and 85 hours, 30 minutes, going north, the preceding year. Of 355 mails carried through, by the *Western* route, to New Orleans from New York, only 127 were conveyed in schedule time, and 228 behind time, against 121 in time and 235 behind time the preceding year; the average time being 89 hours, 45 minutes—5 minutes more than the average the preceding year. Of 304 mails carried through, by the same route, to New York from New Orleans, only 70 were conveyed in schedule time, and 234 behind time, against 126 in time and 182 behind time the preceding year; the average being 93 hours, 24 minutes—5 hours, 8 minutes, more than the average the preceding year. The shortest time, going south, was 77 hours, 30 minutes; going north, 77 hours; against 75 hours, 45 minutes, going south, and 77 hours, going north, the preceding year. These figures show a slight improvement of the service on the *Southwestern* route, and on the *Western* a deterioration, yet not so great as wholly to destroy its usefulness as an adjunct to the other route, on a portion of which, between Washington and Chattanooga, until recently, only a single train a day was run. Arrangements are now in progress for the transmission of double daily through mails over the *Southwestern* route.

An order was made in June last to transfer the great through mails for and from New Orleans to the line of the Alabama and Chattanooga Railroad, diverging from the *Southwestern* route at Chattanooga, Tennessee, and running thence, by an air-line, to Meridian, Mississippi, and thence over the Mobile and Ohio and the New Orleans, Mobile and Texas Railroads, by which it appeared the time of transit might be reduced twelve hours; but the execution of the order was prevented by the interruption of the running of trains on the Alabama and Chattanooga road, so that the capability of that line as a route for the through mails remains yet to be tested by actual experiment.

## DAILY MAIL TO CALIFORNIA.

An arrangement was made in January last to accommodate the citizens of California with a daily mail to and from the East, without the intermission occasioned previously by the lack of Sunday service between Chicago and the Missouri River. For this purpose, an allowance of \$25,000 per annum was made, from January 22, 1871, to the proprietors of the Chicago, Burlington and Quincy and the Burlington and Missouri River Railroads, the companies named being alone responsible to the Department for the service, but having the option of performing it on any one of the three lines between Chicago and Omaha, viz: the Chicago, Burlington and Quincy and the Burlington and Missouri River, *via* Burlington, Iowa; the Chicago and Northwestern, *via* Clinton, Iowa; or the Chicago, Rock Island and Pacific, *via* Rock Island, Illinois. The service has been performed in a manner entirely satisfactory to the Department and to the citizens interested.

## MAIL DEPREDACTIONS.

The number of complaints of missing letters during the year is 4,600, of which 2,057 were registered and 2,543 unregistered, containing bonds, drafts, and currency to the nominal amount of \$418,748 92. Of registered letters, 659 were accounted for as received at their destination, and only 283 have been reported as actually lost. The remaining cases are in the hands of special agents for investigation.

For violations of the postal laws, 123 persons have been arrested, of whom 51 have been convicted and sentenced to different degrees of punishment, and the remainder are in the hands of the Department of Justice to be dealt with according to law.

## RAILWAY POST-OFFICES.

The statement hereto appended shows an increase of eight lines and 2,956 miles of railway post-office service. The number of lines in operation on the 30th day of June, 1871, was 49, extending in the aggregate over 11,208 miles of railroad and steamboat routes. Upon 8,660 miles the service is performed daily, upon 2,527 miles twice daily, and upon 21 miles four times daily, equivalent in all to 13,798 miles each way daily. Counting all the lines both ways, the aggregate service is 27,596 miles daily, and 10,072,540 miles annually. The number of clerks employed was 513, at an annual cost of \$649,400, against 375 clerks, at a cost of \$442,600, for the previous year, showing the increased cost for the fiscal year to be \$206,800. Of this amount, the sum of \$28,600 was expended for the equalization of salaries, the clerks in the western division and on two lines in Massachusetts, numbering in all 143, having been paid, previous to July 1, 1870, for the same class of duties, each \$200 per annum less than those upon the other lines. Deducting this sum, the increased expenditure is \$178,200.

During the last year, the Union Pacific Railroad, 1,032 miles in length, from Omaha, Nebraska, to Ogden, Utah, has been added to this service, and it has been decided to extend this line over the Central Pacific Railroad, an additional distance of 881 miles, from Ogden, Utah, to San Francisco, California.

There is twice-daily service between Portland, Maine, and Chicago, Illinois, and over the greater portion of this route the mail-cars are carried upon the fastest passenger trains, thereby insuring the delivery of all through and way mails in the shortest possible time.

Arrangements have recently been completed to establish a continuous line of railway post-offices from Portland, Maine, over the Maine Central and the European and North American Railways, to Vanceborough, at the boundary-line between New Brunswick and the United States. The authorities of the Dominion of Canada will connect and continue a similar service to St. John, New Brunswick.

Partial arrangements have also been made for a line of railway post-offices from Washington, D. C., to New Orleans, Louisiana, an organization having been effected this month (November) as far as Chattanooga, Tennessee. From that point to New Orleans the service will be established as soon as the negotiations, now pending, can be concluded.

On the 15th instant, a line of railway post-offices was also established from Milwaukee, Wisconsin, to Saint Paul, Minnesota, for the purpose of securing a more accurate and expeditious distribution of the mails for the States of Wisconsin and Minnesota.

The distance from Vanceborough, Maine, to San Francisco, California, *via* Boston, Albany, Buffalo, Toledo, Chicago, and Omaha, is 3,832 miles; and from Vanceborough to New Orleans, *via* Boston, New York, Philadelphia, Baltimore, Washington, and Chattanooga, is 2,108 miles. It is the purpose of the Department to establish continuous lines of railway post-offices connecting these remote points and supplying all diverging lines. They will be the longest lines in the world, and will afford the most ample facilities now known for the transmission and distribution of the mails between the States and Territories which they will respectively traverse.

Special efforts have been made during the past year to perfect the distribution of mail matter upon the several lines. Thorough schemes of distribution have been carefully prepared and furnished the clerks, thus enabling them to facilitate greatly the delivery of mails by the quickest attainable routes.

The value of the railway post-office system was especially demonstrated after the destruction, by fire, of the great distributing post-office at Chicago, Illinois, on the 9th of October last. But for the lines leading to the West and concentrating at Chicago, the mails for the extreme Western and Northwestern States would have been seriously interrupted for many weeks. During the month of October, besides the letter

a large portion of the great paper-mails for the States mentioned were successfully distributed on the cars and passed to their destination with the usual dispatch.

The want of sufficient room upon the cars now in use prevents, however, the proper distribution of the large through paper-mails, subjecting them to frequent delays at the various distributing offices for separation, while the letter-mails go directly forward to their destination.

#### FOREIGN MAILS.

The total number of letters exchanged, during the year, with foreign countries, was 20,295,998, an increase of 1,936,620 over the number reported for 1870. Of this number, 10,461,868 were sent from, and 9,834,130 were received in, the United States.

The number of letters (single rates) exchanged in the mails with European countries was 14,113,560, an increase of 912,114 over the number reported for 1870.

The total postages on the letters exchanged with foreign countries amounted to \$1,735,266 32, being \$229,298 16 less than the amount reported for 1870.

The aggregate amount of postage (sea, inland, and foreign) on the letter-mails exchanged with the United Kingdom of Great Britain and Ireland, Germany, Switzerland, Italy, The Netherlands, Belgium, and France, was \$1,181,057 41, being \$264,885 19 less than the amount reported for 1870. The postages on letters *sent* exceeded the postages on letters *received* from the same countries in the sum of \$5,802 15, being less than one-half of one per cent. of the aggregate amount. The postages collected in the United States amounted to \$755,724 39, and in Europe to \$425,333 02, the excess of collections in the United States being \$330,391 37, or 28 per cent. of the entire postage receipts.

Comparing the year 1871 with the year 1870, the rate of increase in the total number of letters exchanged in the mails with foreign countries was  $10\frac{1}{2}$  per cent., and the rate of decrease in the amount of postages thereon was  $11\frac{1}{2}$  per cent. The increase in the number of letters exchanged with European countries was nearly 7 per cent., and the decrease of postages thereon amounted to  $18\frac{3}{10}$  per cent.; this large reduction in postage receipts having resulted from the greatly reduced rates of international postages established between the United States and the different countries of Europe, which came into operation during the latter half of the fiscal year 1870, but the full effect of which was not realized until the year 1871. The most important of these reductions was that made between this country and the United Kingdom of Great Britain and Ireland on January 1, 1870, when the single rate for prepaid letters was reduced from 12 to 6 cents, causing a like reduction of 6 cents per single rate in the postage charges on letters to and from all countries and places served by the British mails. This was followed by reduced postage charges, from 15 to 10 cents per single rate, on the letters

exchanged by closed mails, *via* England, with Germany, Belgium, Italy, The Netherlands, and Switzerland, including all countries and places to which they respectively serve as intermediaries, which came into operation near the close of the last fiscal year. Reduced rates of postage were also established, at the same time, to countries on the west coast of South America, British Columbia, Sandwich Islands, New Zealand, Australia, and the East Indies.

The total weight of the mails exchanged, during the year, with European countries, under provisions of existing postal conventions, was 1,298,966 pounds; the weight of the letter correspondence being 231,905 pounds, and of printed matter and samples 1,017,061 pounds. The aggregate weight of the mails sent to Europe was 627,591 pounds, and of mails received from Europe 671,375 pounds. The weight of letter correspondence sent to Europe was 155,601 pounds, and of letter correspondence received from Europe 126,304 pounds.

The cost of the United States transatlantic mail steamship service for the year 1871 was \$174,138 39, being \$148,153 48 less than the cost of the same service during the year 1870. The steamships employed under contract with this Department received the sea postages of 6 cents an ounce on letter-mails, and 6 cents a pound on other matter, as full compensation for the service. The earnings of the respective lines were as follows, viz:

The Liverpool and Great Western line, for 53 trips, from New York to Queens-town .....	\$60,805 38
The Inman line, for 53 trips, from New York to Queenstown and Liverpool .....	49,537 35
The Cunard line, for 49 trips, from New York to Queenstown and Liverpool .....	22,178 81
The Hamburg-American Packet Company, for 29 trips, from New York to Plymouth and Hamburg .....	20,415 69
The North German Lloyd, of Bremen, for 48 trips, from New York to Southampton and Bremen .....	15,676 32
The Canadian line, for 52 trips, to Liverpool .....	5,524 84
<b>Total .....</b>	<b>174,138 39</b>

The United States postages on the mails conveyed to and from the West Indies, Mexico, Panama, South Pacific, Belize, (Honduras,) Nova Scotia, Newfoundland, and Bermuda, amounted to \$125,780 93, and the cost of the sea conveyance thereof was \$76,857 32. The United States postages on the mails exchanged with Brazil, Japan and China, the Sandwich Islands, New Zealand, and Australia, by means of the subsidized lines of direct mail steamers, amounted to \$46,993 52.

The total cost of the United States ocean mail steamship service for the year 1871 (including \$725,000 paid from special appropriations for steamship service to Japan and China, to Brazil, and to the Hawaiian Islands) was \$975,995 71.

The mail steamship service on all the ocean routes has been regularly performed according to contract. The transatlantic mails have been conveyed exclusively by foreign steamship lines, receiving, under the general law, the sea postages thereon as compensation for the service. Regular monthly service has been maintained on the United States mail steamship routes to Japan and China, to Brazil, and to the Hawaiian Islands. There is no doubt that an increase of service from monthly to semi-monthly trips on the Brazil and China lines would greatly promote their efficiency for postal and commercial purposes. The great length of each of these routes, between ports distant from each other 5,500 and 7,000 miles, respectively, renders a monthly mail service on either of them disjointed and inadequate for rapid reliable postal communication. This is peculiarly the case with regard to the mail service performed on the United States and Brazil line. The schedule of sailing-days is the best that can be arranged for a monthly service on a route of that length, and allows, at most, only two days at New York between the arrivals and departures of the steamers, so that merchants in Boston, Philadelphia, Baltimore, and other Atlantic seaboard cities are usually unable to answer correspondence or fill orders by the return steamers, causing them great delay, inconvenience, and loss. The result is that a majority of the letters from the United States for Brazil are forwarded in the British mail *via* Southampton, reaching their destination by that circuitous route sooner than if detained a month for transmission by the next direct steamer from New York to Rio de Janeiro. It is manifest, therefore, that a monthly service on this commercially important route is inadequate to the wants of the public, and fails to accomplish the purposes which Congress had in view in granting a money subsidy to this line of steamers.

In my report of last year I renewed the recommendation of the preceding year for an increase of mail service to semi-monthly trips on the route from San Francisco to Japan and China. I am still impressed with the importance of authorizing additional trips on this line, the establishment of which has already given us the control of the large and rapidly increasing commerce of the North Pacific Ocean with Japan and China; and, for like considerations, I deem it expedient that suitable provision should be made for increasing the service from monthly to semi-monthly trips on the steamship line from New York to Rio de Janeiro.

An application was made to Congress at its last session, by American citizens, for governmental aid in establishing an American line of mail steamships between San Francisco, New Zealand, and the Australian colonies, by way of the Sandwich Islands. A bill granting a money subsidy to the proposed line was reported by the Senate Committee on Post-Offices and Post-Roads, but it failed to pass the Senate, as did all other similar bills proposing Government aid to projected steamship lines. Disappointed in obtaining the desired legislation from Congress,



the projectors of this enterprise entered into a contract for the contemplated service with the government of New Zealand, which government had previously signified its readiness to assist, by a moderate subsidy, in establishing a direct postal communication by steamships with the United States. An American line of steamships has thus been placed upon the route between San Francisco, New Zealand, and Australia, *via* the Sandwich Islands, and is now carrying our mails regularly once in four weeks from San Francisco, under the patronage of the New Zealand government, with the expectation, on the part of the proprietors of the line, that additional aid to maintain this service will be granted by Congress at the approaching session. There can be no question of the commercial importance to the United States of establishing and maintaining a direct and rapid steam communication by American steamships with the countries and islands of the Southwest Pacific Ocean. Such a line will secure to our citizens a large share of the trade of those colonies, now rapidly growing in population and wealth, and greatly benefit the general business interests of the country. A large portion of the heavy traffic and travel between Europe and Australia, which has heretofore taken the routes *via* Suez and the Cape of Good Hope, will be transferred to the American route *via* San Francisco, if reliable and rapid steam communication shall be permanently established between that port and the countries of Australasia. Already, since the inauguration of direct steamship service from San Francisco, heavy English mails are being transported across our continent to and from New Zealand and the Australian colonies, the time occupied in their conveyance to destination being less by nearly two weeks than by the Suez route. As manifest considerations of public policy and commercial advantage make it desirable to sustain a first-class line of American steamships upon this route, the question of uniting with the Australian colonies in the support of the existing service by a moderate money subsidy is respectfully submitted to Congress for its consideration and appropriate action.

In previous reports I have called attention to the importance of judicious legislation to encourage the establishment of American mail steamship lines. For several years past we have practically ceased, as a nation, to compete with other maritime powers in ocean steam navigation. Various projects have been devised and urged upon Congress by interested parties, many of them without capital or practical experience in steam commerce, seeking large subsidy grants, in a variety of forms, for the conveyance of our mails in American steamships to European ports. Much valuable time has been devoted by the Post-Office committees and by Congress to the consideration and discussion of the many conflicting schemes presented for their action, without accomplishing any practical results; and the transportation of our mails, passengers, and freights across the Atlantic is still performed *solely* by the steamship lines of other nations. Surely some

is demanded to revive the great maritime interests of the country and encourage the construction and equipment of an efficient ocean steam mercantile marine. The subject is one of paramount importance to the material interests of the country, and should receive the most thorough and careful attention of Congress.

It is a very gratifying fact, in this connection, to state that, amid all the discouragements of the present situation, a new line of American iron steamships, to ply between Philadelphia and Liverpool, consisting of four first-class propellers of 3,000 tons each, (old measurement,) are now being built on the Delaware for the American Steamship Company of Philadelphia, of materials exclusively of American manufacture. They will be completed and ready for service early in the fall of 1872, and will form a regular weekly line between the above-named ports. The proprietors of this pioneer line of American iron steamships are among the most enterprising merchants and capitalists of Philadelphia, and deserve such encouragement in their praiseworthy undertaking as can properly be extended by Congress. A reasonable compensation for conveying the mails, in excess of the postage receipts, is probably the only Government aid needed to insure the permanent establishment of this or any other similar line of American ocean steamers plying between our own and foreign ports; and, in my judgment, the granting of such incidental aid, in connection with proper legislation to encourage the construction by American builders of first-class iron steamships, is the most simple, economical, and practical method of establishing American lines of ocean steamers and advancing the general commercial prosperity of the country.

An additional article to the postal convention between the United States and Germany was signed at Washington March 3, and at Berlin May 14, 1871, reducing the postage on direct letter-mails exchanged between the two countries, a copy of which is annexed. Arrangements have also been concluded with the German postal administration, and carried into operation on the 1st of October, 1871, further reducing the postage charge for prepaid letters between the United States and Germany transmitted by closed mail *via* England from 10 to 7 cents per single rate, and also the postage charges for prepaid letters by the direct routes *via* Bremen and Hamburg, respectively, from 7 to 6 cents per single rate.

Postal conventions have been negotiated with the republic of Ecuador and with the Argentine Republic establishing and regulating the reciprocal exchange of correspondence with each of those countries at reduced rates of international postage. The duplicate originals of said conventions have been transmitted to those governments, respectively, for ratification, and notice was recently received through the Department of State that the convention with Ecuador had been ratified by the congress of that republic.

Negotiations are in progress with the governments of Denmark, Swe-

den, and Norway for the conclusion of postal conventions ameliorating the exchange of correspondence and reducing rates of postage between the United States and each of those kingdoms. I have every reason to hope for the early conclusion of the desired conventions.

I have also submitted to the Russian government, through its minister at Washington, propositions for a postal convention with Russia providing for an exchange of correspondence with that country in closed mails *via* England and Germany, at moderated postage charges.

Negotiations have been renewed for a postal convention with France, but I regret to state that there is little prospect of a favorable result. Modified propositions, based on the liberal provisions of our postal arrangements with Germany and other leading countries of Europe, were submitted by this Department more than a year ago, at the request of the French minister at Washington, and transmitted by him to his government for consideration and instructions. No reply having been received, the attention of Mr. Washburne, our minister to France, was recently invited to the subject, with request to bring these proposals to the notice of the French government, and, if possible, have them considered and acted upon by the proper authorities at Paris; but I am not advised that any action has yet been taken.

#### APPOINTMENTS.

The report of the Appointment Office shows the following:

Number of post-offices established during the year .....	2, 407
Number discontinued .....	854
Increase .....	1, 553
Number in operation on June 30, 1870 .....	28, 492
Number in operation on June 30, 1871 .....	30, 045
Number to be filled by appointments of the President .....	1, 172
Number to be filled by appointments of the Postmaster General.....	28, 873

Appointments were made during the year:

On resignations .....	4, 307
On removals .....	1, 179
On changes of names and sites .....	178
On deaths of postmasters .....	309
On establishment of new post-offices.....	2, 407

Total appointments..... 8, 370

Number of cases acted on during the year..... 9, 416

The number and aggregate compensation of special agents, route-agents, mail-route messengers, railway post-office clerks, and local agents in service during the year ended June 30, 1871, were:

50 special agents .....	\$121, 899 00
684 route-agents.....	671, 280 00
163 mail-route messengers.....	61, 910 00
513 railway post-office clerks.....	649, 400 00
22 local agents .....	58, 430 00

Total compensation..... 1, 502, 919 00

## FREE-DELIVERY SYSTEM.

The free-delivery system has been in operation during the year in fifty-two of the principal cities, with the following aggregate results:

Number of letter-carriers .....	1, 419
Mail letters delivered.....	112, 612, 693
Local letters delivered.....	27, 045, 769
Newspapers delivered.....	32, 610, 353
Letters collected .....	113, 287, 602
Amount paid carriers, including incidental expenses.....	\$1, 353, 923 23
Postage on local matter.....	\$758, 120 78

This shows the following increase, compared with last year:

Letter-carriers .....	57
Mail letters delivered.....	14, 800, 862
Local letters delivered.....	5, 248, 111
Newspapers delivered .....	4, 743, 330
Letters collected .....	15, 496, 556
Amount paid carriers, including incidental expenses .....	\$123, 843 39
Postage on local matter.....	\$76, 256 08

## EMPLOYÉS IN THE POST-OFFICE DEPARTMENT.

The following table will show the number of employés in the Post-Office Department; also the number of postmasters, contractors, clerks in post-offices, route-agents, railway post-office clerks, and other officers, in service on the 30th June, 1871:

Department officers:	
Postmaster General.....	1
Assistant Postmasters General .....	3
Superintendent of Foreign Mails.....	1
Superintendent of Money-Order Office .....	1
Chief of division of dead letters .....	1
Chief clerk of Department .....	1
Chief clerks of Bureaus.....	4
Clerks, laborers, watchmen, &c .....	319
Total departmental .....	331
Other officers:	
Postmasters.....	30, 045
Contractors .....	7, 286
Clerks in post-offices.....	3, 439
Letter-carriers .....	1, 419
Route-agents.....	684
Railway post-office clerks.....	513
Mail-route messengers .....	103
Local agents .....	82
Special agents.....	52
	43, 623
Total in service .....	43, 954

## DEAD LETTERS.

The number of letters, domestic and foreign, received at the dead-letter office during the last fiscal year was as follows:

Domestic letters, classed as—	
Ordinary .....	2, 931, 244
Drop .....	492, 300
Unmailable .....	373, 363
Hotel .....	96, 739
Fictitious .....	66, 264
Registered .....	6, 162
Returned from foreign countries .....	77, 010
Total domestic letters .....	3, 973, 075
Foreign letters .....	221, 673
Whole number .....	4, 194, 748

Of domestic letters not registered, 16,218 contained money amounting to \$59,608 37, in sums of one dollar and upward; and of the registered letters, 2,359 contained \$19,204 61, making a total of 18,577 letters, containing \$78,812 98. Of these, 17,082, containing \$74,420 90, were delivered to the writers or persons addressed; 2,902, containing \$10,397 02, which could not be returned to the owners, were filed for reclamation; and 1,495, containing \$4,392 08, were outstanding. The number inclosing sums less than one dollar was 14,956, containing \$3,808 92; of which 12,413, containing \$3,004 90, were delivered to the writers, and 2,543, containing \$714 02, were filed for reclamation.

The number of letters containing bank checks, drafts, deeds, &c., was 19,193, of the nominal value of \$3,075,869 23; of which 17,905, of the nominal value of \$2,855,030 31, were delivered to the owners, and 1,288, of the nominal value of \$220,838 92, were outstanding or filed for reclamation.

The number of packages and letters containing jewelry, books, and other property was 6,498; of which 4,298 were delivered, and 2,200 were filed for reclamation.

The number containing photographs was 42,119; of which 36,544 were delivered, and 5,575 were filed. The number containing receipts, bills of lading, &c., was 28,196; of which 27,081 were delivered, and 1,115 were filed. The number containing postage and revenue stamps and articles of small value was 40,749; of which 37,889 were delivered, and 2,860 were filed.

The number of letters without inclosures remailed to the writers was 1,628,803; of which 1,334,303 were delivered, and 294,500 were returned to the office and destroyed. The number in which the writer's name and local address were omitted or were illegible, and of letters containing circulars, &c., and consequently destroyed, was 2,173,984.

Of the unmailable letters, 301,472 were detained for postage, not being prepaid, as required by law. They were either wholly unpaid,

were not prepaid one full rate, or were stamped with illegal or revenue stamps; 68,373 were misdirected, the post-office, State, or some necessary part of the address being omitted; and 3,518 had no address whatever.

The number of applications for dead letters was 7,371, and in 2,471 cases the letters were found and forwarded to the owners.

The amounts deposited in the United States Treasury were—

For unclaimed dead-letter money during the year.....	\$8,480 16	
For unclaimed dead-letter money on July 5, 1871.....	2,200 00	
		<u>\$10,680 16</u>
For proceeds of sale of jewelry, books, &c .....		1,669 35
For proceeds of sale of waste-paper during the year.....	\$2,229 45	
For proceeds of sale of waste-paper on July 1, 1871 .....	1,248 75	
		<u>3,478 20</u>
Total deposited to July 5, 1871.....		<u><u>15,827 71</u></u>

#### POSTAL MONEY-ORDER SYSTEM.

During the last fiscal year, the number of money-order offices in operation was 2,076. On the 31st of July, 1871, 376 additional money-order offices were established, so that the whole number of such offices is at present 2,452.

The number of domestic money-orders issued during the year was 2,151,794, the aggregate value of which was .....	\$42,164,118 03
The number of such orders paid was 2,121,664, amounting in value to .....	\$41,705,667 03
To this sum is to be added the amount of orders repaid to the purchasers .....	321,669 28
Total of payments. ....	<u>42,027,336 31</u>
Excess of issues over payments.....	<u><u>136,781 72</u></u>

The amount of fees or commissions paid by the public to postmasters for the issue of orders was \$295,286 15.

This statement shows an increase over 1870, in the amount of orders issued, of \$8,109,923 32, or 23½ per cent.; in the amount of orders paid, of \$8,099,411 52, or 23½ per cent.; and in the amount of fees received, of \$60,050 35, or 25½ per cent.

The average amount of the money-orders issued during the year was \$19 59. This amount varies but little from year to year, not having fallen below \$19 for the last five years, and having only once slightly exceeded \$20.

The whole number of duplicate orders drawn was 8,858, of which 8,725 were issued in lieu of original orders which failed to reach the respective payees because of their change of residence, or because of erroneous or imperfect address, or for other causes; 111 were substituted for orders which became invalid because not presented for payment before the expiration of one year after date; and 22 for orders

rendered invalid in consequence of bearing, contrary to law, more than one indorsement.

The increase in the number of duplicates during the last year was 1,683, or 23½ per cent., nearly the same rate of increase as that of the orders issued and paid.

The receipts and expenditures of the last year, as adjusted and reported by the Auditor, were as follows, viz:

Receipts:	
Fees received for money-orders issued .....	\$396, 236 15
Amount received for premium on drafts .....	277 23
Total .....	396, 563 38
Expenditures:	
Commission to postmasters and allowances for clerk hire....	\$177, 773 56
Allowances for remittances lost in transmission by mail.....	7, 715 00
Incidental expenses for stationery and fixtures.....	8, 693 04
	194, 381 60
Excess of receipts over expenditures, being revenue derived from the trans- action of the money-order business.....	101, 181 78

During the past year, the amount of surplus money-order funds accruing at the smaller post-offices from the sale of money-orders, and by them remitted to and deposited in the larger or first-class offices designated as their depositories, was \$30,965,223 35.

Forty-two remittances, to the aggregate amount of \$11,053 52, were reported as having been lost in transmission by mail last year, of which the sum of \$4,492 52 was recovered through the efforts of special agents of the Department; the sum of \$2,627 was allowed to the credit of postmasters who furnished satisfactory proof that they had, respectively, duly remitted the several amounts stated by them; credit claimed for remittances to the amount of \$495 was disallowed; and claims amounting to \$3,439 were unsettled and pending at the close of the year.

The total amount of allowances made to postmasters during the year for lost remittances was \$7,715; but of this amount the sum of \$5,088 was on account of losses during previous years.

The drafts drawn by postmasters whose money-order payments habitually exceed their issues against credits furnished them to a designated amount, in each case, with the postmaster at New York, amounted to \$3,850,227 86. Funds amounting in the aggregate to \$58,636 15 were also furnished by the postmaster at San Francisco to postmasters in the Pacific States and Territories who required assistance to pay orders drawn upon them.

Out of the whole number of orders paid, viz: 2,121,664, payment of 30, amounting to \$922 68, was claimed to have been improperly or fraudulently obtained. In nine cases, the amount of the orders, \$381 54, was recovered by special agents and paid to the rightful owners. In five cases, amounting to \$141, the paying postmasters were held responsible

for the erroneous payment and required to pay over that amount to the several persons entitled to receive it. The Department refunded the amount of two orders, for \$45, improperly paid, the postmaster not having been found at fault. In four cases, amounting to \$81, the claim for compensation was not allowed, as it was discovered upon investigation to be without good foundation. Ten cases, of the value of \$274 14, are still pending.

From the establishment of the money-order system, on the 1st of November, 1864, the profits accruing from its operations have been as follows, viz :

Proceeds from November 1, 1864, to July 1, 1866.....	\$90 82
Proceeds during the fiscal year 1867.....	26, 260 61
Proceeds during the fiscal year 1868.....	54, 158 15
Proceeds during the fiscal year 1869.....	65, 553 87
Proceeds during the fiscal year 1870.....	90, 174 63
Proceeds during the fiscal year 1871.....	101, 181 78
	<hr/>
	337, 419 86
	<hr/>

Postmasters are allowed, by the standing regulations of the Department, "to make deposits of surplus money-order funds, by procuring from any disbursing officer of the United States a check on an assistant treasurer or designated depository thereof located in the same city or town as the post-office where the deposit is to be made." This mode of remittance is not only very convenient for postmasters of money-order offices at or near military posts, but is often the only means by which they can forward their surplus funds without extreme danger of loss. The Treasury Department, however, by the Second Comptroller's circular of May 15, 1871, notified disbursing officers that it would decline thereafter to approve any duplicate check except for "additional bounty and pensions, as specially authorized by law," for the reason that Congress, at its last session, declined to pass a bill providing a general system for the issue and payment of duplicates of lost checks drawn by disbursing officers of the United States. Hence, if such check, drawn in consideration of money-order funds received from a postmaster, is lost or destroyed, the money which it represents is lost to this Department. A case of this kind has already occurred, a quartermaster's check for \$522, in favor of the postmaster at New York, having been lost in course of transmission by mail by the total wreck of a steamer off Cape Hatteras. For this check no duplicate can now be obtained. Under these circumstances, I would respectfully suggest such legislation as would authorize disbursing officers of the Army, under regulations to be prescribed by the Treasury Department, to issue duplicates of lost checks drawn by them in favor of one postmaster on account of public moneys received from another.

By the act of February 13, 1865, any assistant treasurer or depository of the United States is allowed, in case of sickness or unavoidable ab-



sence from his office, to authorize, with the approval of the Secretary of the Treasury, his chief clerk, or some other clerk employed therein, to act in his place, and to discharge all the official duties required of him by law, "provided that the official bond given by the principal of the office shall be held to cover and apply to the acts of the person appointed to act in his place in such cases." The interests of the postal service require the passage of an act giving postmasters at money-order offices similar authority in like circumstances.

The recommendation made in my last report with reference to the expediency of additional legislation to authorize the extension of the money-order system to the stations or sub-post-offices in the large cities is respectfully renewed.

During the year 1871, the amount, in currency, received by postmasters for orders issued by them on the exchange office at New York in favor of payees in Switzerland, was \$38,489 56. The amount of orders paid in the United States on account of remittances from Switzerland was \$12,003 53; showing an increase over the corresponding transactions of last year of \$16,299 86, or 73.45 per cent., in the issues, and a decrease of \$8,447 39, or 70.37 per cent., in the payments. From the commencement of the international system with Switzerland, on the 1st of September, 1869, to the close of the last fiscal year, a period of twenty-two months, the amount of orders issued by the United States offices for payment in Switzerland was \$60,679 26, and the amount of orders paid on account of remittances from that country was \$32,454 45. After payment of the entire balance due Switzerland on account of this exchange of money-orders, a net profit of \$4,521 21 accrued to the United States, the expenses proper, exclusive of the premiums paid for gold funds purchased to pay balances found due periodically to Switzerland, having amounted to but \$51 87. The total cost of such premiums was \$2,623 77.

It was stated in my last annual report that negotiations were in progress for the establishment of an international system of postal money-orders between the United States and the United Kingdom of Great Britain and Ireland. As these negotiations, which were conducted by means of epistolary correspondence for a period of eighteen months, failed to effect an agreement as to the provisions of such a system, I decided, in May last, to send a competent officer of this Department to confer personally with the postal authorities of the United Kingdom upon the points in controversy. The Superintendent of the Money-Order System was accordingly dispatched to London for that purpose on the 25th of that month, as a special agent, duly authorized to negotiate the terms of a convention for a money-order system between the two countries, subject to my approval, by and with the advice and consent of the President. The special agent succeeded in negotiating a convention for that object, which was signed in London, June 30, 1871, and approved and signed in Washington July 27, 1871. A copy of that convention

will be found in the appendix. In pursuance of its provisions, the money-order system between the two countries went into operation October 2, 1871. From that date up to October 28, a period of four weeks, the amount of the orders remitted from this country to Great Britain was \$63,061 13, and of orders in the opposite direction \$14,684 19, a manifest indication that this system of exchange supplies an existing public want and will be extensively used by remitters of small sums to and from Great Britain.

A communication having been received May 15, 1871, from the post department of the German Empire, expressing a desire to enter into negotiations "for the introduction of the money-order system into the postal intercourse between the two countries," I instructed the special agent above mentioned to proceed, after having completed negotiations with the British office, to Berlin, and to treat with the post department of Germany as to the terms of a convention for establishing an international money-order system with that country. A convention to that end was duly negotiated, in pursuance of these instructions, with an authorized agent of the German post department, at Berlin, July 22, 1871, and now awaits complete ratification by the proper authorities of both countries. By the terms of this convention, the money-order business between the two countries is to commence on the 1st of October, 1872.

#### MISCELLANEOUS.

The recent experience of the Contract Office of this Department indicates the propriety of a material amendment to the laws regulating mail contracts.

On the 30th of September, 1870, advertisements were issued, in regular form, for all mail contracts in the section comprising the States of West Virginia, Virginia, North Carolina, South Carolina, Georgia, Florida, Alabama, Mississippi, Louisiana, Texas, and Arkansas. In response to these advertisements, many bids were received and duly entered, and, under the 24th section of the act of July 2, 1836, contracts were, without exception, awarded to the lowest bidders. On the 1st of July, the time when, agreeably to the advertisement and the usage of the Department, the new contractors were required to commence the discharge of their duties, it was ascertained that the bidders to whom contracts on most of the important routes had been awarded had failed to perform the service. The whole number of failing bidders was 195, and the routes thus left without regular contractors were found to be located as follows: 3 in West Virginia, 11 in Virginia, 2 in Georgia, 2 in Florida, 77 in Alabama, 2 in Mississippi, 11 in Louisiana, 42 in Texas, and 45 in Arkansas. Suspecting that the bidders who had thus failed were not acting in good faith, and that in many cases they were fictitious and what are called "straw bidders," the Department, on the 19th July last, addressed a letter to the Attorney General, stating the condition of affairs, and asking for an authoritative interpretation of the law

as to the powers of the Postmaster General in making contracts for the conveyance of the mails.

In strict conformity with the opinion of the Attorney General, dated July 22 last, the Department proceeded to make temporary contracts, on the best terms attainable, for six months, or longer, in the discretion of the Postmaster General, and to readvertise, for the residue of the contract term, all the routes whereon service had failed. The new advertisements, for a reletting from January 1, 1872, to June 30, 1875, were issued on August 4, 1871, and the new awards were made on the 1st of November, instant.

It was hoped that, under the operation of the 4th section of the act of March 3, 1871, which required all bidders to accompany their bids for five thousand dollars or over with a certified check or draft, payable to the order of the Postmaster General, for an amount not less than five per cent. of their bids, and which was applied, for the first time, to the bids under the last-named advertisement, a more favorable result would be obtained. I regret, however, to be obliged to say that the bids under the last advertisement are in no respect an improvement on those under the first, and that, of all the routes readvertised, only two were awarded to bidders who bid over five thousand dollars and who gave evidence of honesty of purpose by accompanying their bids with a check for five per cent. of the amount thereof.

This second failure satisfied me that, under existing laws, it is impossible for the Department to secure a fair competition among responsible parties who are willing and able to perform the required service for a fair price. Herewith I file a statement of the Second Assistant Postmaster General, showing the number and termini of all the routes readvertised, the compensation under the old contracts, the amount of failing bids, the cost per annum of temporary service for six months, and the amount of accepted bids for the same from January 1, 1872, from which it will appear that the cost of temporary service is largely in excess of the cost of a like amount of service under the regular contracts, which expired on the 1st of July last.

Hoping to frustrate like attempts to defraud the Government in the future, I respectfully recommend that the laws regulating mail contracts be so amended as to make it a misdemeanor, punishable by fine and imprisonment, for any person who, after bidding for mail service and receiving an award thereof, shall fail to make a contract in due form and perform the service described in his bid or proposal, and also so as to declare it to be a misdemeanor, punishable in like manner, for any person to withdraw or attempt to withdraw, after the day appointed for the opening thereof, any bid he may make for such service, until a contract therefor shall have been duly signed and accepted and the contractor shall have proceeded to perform his duties thereunder to the satisfaction of the Postmaster General. I furthermore recommend that additional power be given to the Postmaster General to reject manifestly fraudulent

or fictitious bids, and, after a regular bidder or contractor shall have failed to enter into contract, or to fulfill his contract when made, to proceed to contract on the best terms obtainable from any responsible party, whether a bidder or not, for the performance of the service for the residue of the contract term. If it be deemed advisable to continue in force the provision requiring certified checks or drafts to accompany the bids, then I recommend that the amount of the check or draft in each case be fixed at five per cent. of the last regular contract price, where said contract price exceeded \$5,000. This would compel bidders to make deposits in support of their proposals on all the more important routes, and would not leave open, as now, an opportunity to the fraudulent bidder to defeat the law by simply reducing his bid below five thousand dollars.

The Postmaster General being required by a clause of the first section of the civil appropriation act of March 3, 1871, to fix the rates to be paid for telegraphic dispatches by the several Departments of the Government, I called to my assistance Brigadier General Albert J. Myer, Chief Signal Officer of the Army, and, upon his recommendation, supported by the legal opinion of Hon. William Whiting, specially retained as Assistant Attorney General, I passed an order, dated June 29 last, declaring—1st. That the rates for all telegraphic communications known as the signal-service messages and reports should be two cents for each word for each circuit over which it may pass in accordance with the schedule of circuits and plans of the Chief Signal Officer of the Army, and that no additional or extra allowance should be made under any pretext whatever; 2d. That for all other communications on behalf of the Government the rate should be one cent per word for each distance of two hundred and fifty miles or fraction of such distance. The views of General Myer are fully stated in a communication addressed to the Postmaster General, dated 18th of July last, and made part of this report.

The postal telegraph is by far the most important subject now inviting consideration in connection with the transmission and interchange of intelligence. The governments of the continental countries of Europe have, with few exceptions, claimed and exercised for years past the right of controlling and managing the electric telegraph, and in every instance with a degree of success commensurate with the care and attention bestowed upon their respective administrations. In Sweden, Norway, Russia, Bavaria, Italy, Turkey, Greece, and Spain, great advantages have been gained by making the telegraph a part of the public postal system; while in Switzerland, Belgium, The Netherlands, Prussia, and France, where modern appliances and improvements have been more thoroughly utilized, the policy of governmental control has been fully vindicated. It remained for Great Britain to give a practical test of the public system as compared with the management of corporations and companies of private stockholders. After a protracted and

most laborious investigation, Parliament passed, on 31st July, 1868, "An act to enable Her Majesty's Postmaster General to acquire, work, and maintain electric telegraphs," which was followed on the 9th August, 1869, by an act providing the money necessary to purchase the undertakings of the several telegraph companies in Great Britain and Ireland. On the 5th of February, 1870, the transfers were effected, and the work of the postal telegraph began. At first, serious difficulties were encountered by reason of the delay in passing the money bill and the inadequate preparations to accommodate the immense increase of business which immediately followed the large reduction of rates. These difficulties, however, were soon overcome, and, thanks to the indefatigable and intelligent labors of Hon. Frank Ives Scudamore, second secretary, and his assistants, the advocates of the measure can already boast of its triumphant success. The charges established in the beginning were uniform throughout the United Kingdom, without regard to distance, and were fixed at the maximum permitted by law, that is to say, one shilling (24 cents) for the first twenty words or part of twenty words, and threepence (six cents) for each additional five words or part of five words, exclusive of signature and address. Referring to an elaborate report of Mr. Scudamore, it appears that the average cost of inland messages was about one shilling, one penny, (26 cents,) against an average cost prior to the transfer of one shilling, sevenpence, (38 cents,) showing a reduction in price of nearly one-third. In the first week after the transfer, the number of messages (exclusive of news and press messages) forwarded from all stations was 128,872; in the week ending 31st March, the number had risen to 160,775. The average weekly number in 13 weeks, to 30th June, was 177,410; the average number in 13 weeks, to 30th September, was 200,787; and the average number in 13 weeks, to 31st December, was 203,572. In the week ending on the 31st December, which is usually considered the worst week in the year for telegraphic work, the number was 144,041, or nearly 16,000 in excess of the number of the first week. The total number of messages forwarded in the three quarters, to 31st December, 1870, was as follows:

In quarter to 30th June.....	2, 306, 340
In quarter to 30th September.....	2, 610, 337
In quarter to 31st December.....	2, 646, 438
	<hr/>
In three quarters.....	7, 563, 015
	<hr/>

In addition to the foregoing, ample provision was made for the press and news work. The companies, before the transfer, sent news to 306 subscribers in 144 towns only in the United Kingdom; the postal telegraph sent news to 1,106 subscribers in 385 towns. The companies sent news to 173 newspapers only; the postal telegraph sent news to

rapidity and to what extent they have been intrusted with the money of the people:

Period.	Number of post-office savings banks.	Number of deposits.	Amount of deposits.	Total sum standing to credit of post-office savings banks on books of National Debt Commissioners at close of the year.	Balance in hands of Postmaster General, after allowing for charges of management, at close of the year.	Total balance in hand applicable to payment of depositors at close of the year.
From September 16, 1861, to December 31, 1862...	2, 535	639, 316	£2, 114, 669	£1, 659, 039	£35, 692	£1, 694, 731
Year 1863.....	2, 901	842, 848	2, 651, 209	3, 328, 189	44, 413	3, 372, 595
1864.....	3, 081	1, 110, 769	3, 350, 000	4, 995, 663	5, 522	5, 001, 185
1865.....	3, 321	1, 302, 309	3, 719, 017	6, 582, 329	4, 327	6, 586, 656
1866.....	3, 507	1, 525, 871	4, 400, 657	8, 231, 176	25, 791	8, 256, 967
1867.....	3, 699	1, 562, 344	4, 643, 906	9, 667, 703	47, 690	9, 715, 393
1868.....	3, 813	1, 757, 303	5, 333, 636	11, 943, 033	NIL	11, 943, 033
1869.....	4, 047	1, 998, 644	5, 787, 218	13, 755, 547	19, 386	13, 774, 933
1870.....	4, 062	2, 135, 993	5, 995, 121	15, 305, 040	158, 888	15, 463, 928

The total amount in hand after ten years' operations, and for which the British government pays only  $2\frac{1}{2}$  per cent. interest, is £15,463,928, or \$75,145,690—a much larger sum than will be required for the purchase and thorough repair of all the telegraphic lines in the United States.

Convinced of the wisdom of establishing the postal telegraph and post-office savings banks in this country, I earnestly recommend the passage by Congress of the laws necessary therefor. In my judgment, those laws should provide as well for the absolute purchase of the lines and appurtenances of all telegraph companies now in operation as for the exclusive right and authority of the Government, after the several purchases shall be concluded, to conduct the business of transmitting telegraphic messages.

Again I renew my recommendation for the repeal of the franking privilege. Its existence is utterly incompatible with an economical and vigorous administration of postal affairs. Flagrant frauds have been practiced during the past year, and will continue to be practiced, under its cover, so long as the privilege is protected by law. I refer to my arguments on this subject in former reports with unshaken confidence in their soundness.

The bill "to revise, consolidate, and amend the statutes relating to the Post-Office Department," known as the postal code, having failed in the last Congress, has been again introduced into the Senate. Much time and labor having been expended in perfecting it, I trust it may be passed at the approaching session with as little delay as possible. It contains some new provisions of much importance—among others, an

authority for the introduction of correspondence-cards, an improvement for which a strong desire has been manifested on the part of the public.

The salaries of the three Assistant Postmasters General and the Superintendents of Foreign Mails and the Money-Order System are entirely incommensurate with their valuable services. The Government, in simple justice to a class of officers whose faithful labors in its behalf require them to remain with their families in Washington during the entire year, should not hesitate to increase their annual compensation to \$5,000. I cheerfully reiterate my acknowledgment of their conspicuous merit and industry, and earnestly commend them to the favorable consideration of Congress.

Renewing the assurances of my high regard, I have the honor to be your obedient servant,

**JNO. A. J. CRESWELL,**  
*Postmaster General.*

**The PRESIDENT.**

# P A P E R S

## ACCOMPANYING

### REPORT OF THE POSTMASTER GENERAL.

*Estimates for expenditures for the fiscal year ending June 30, 1873.*

For inland mail transportation, including pay of mail-messengers, route-agents, mail-route messengers, local agents, railway postal clerks, baggage-masters in charge of through mails.....	\$15,400,000
For foreign mail transportation .....	300,000
For ship, steamboat, and way letters .....	10,750
For compensation to postmasters .....	5,525,000
For clerks for post-offices .....	2,800,000
For payments to letter-carriers .....	1,425,000
For wrapping-paper .....	30,000
For twine .....	38,000
For letter-balances .....	3,500
For compensation to blank agent and assistants .....	10,000
For office furniture .....	3,500
For advertising .....	70,000
For postage-stamps and stamped envelopes, including salary of distributing agent and incidental expenses of agency .....	620,000
For mail depredations and special agents .....	130,000
For mail-bags and mail-bag catchers .....	180,000
For mail-locks and keys .....	40,000
For post-marking and canceling stamps for offices .....	12,000
For miscellaneous payments, including balances due foreign countries; the preparation and publication of post-route maps; rent, light, fuel, stationery, and miscellaneous items for post-offices; registered-package envelopes; official envelopes for use of postmasters; dead-letter envelopes; fees to United States marshals, clerks of courts, and attorneys; engraving, printing, and binding drafts and warrants; and miscellaneous items.	892,000
Total estimated expenditures .....	27,489,750
Estimated amount provided by the Department, being its own revenue accruing from postages and appropriations for free-mail service.....	22,740,749
Amount to be provided from the general Treasury to make the receipts equal expenditures.....	4,749,001
Expenditures under special appropriations to be provided out of the general Treasury :	
For steamship service between San Francisco, Japan, and China.....	\$500,000
For steamship service between the United States and Brazil .....	150,000
For steamship service between San Francisco and the Sandwich Islands..	75,000
Total .....	725,000

W. H. H. TERRELL,  
Third Assistant Postmaster General.



## Comparative statement of dead letters received and disposed of during fiscal years 1870 and 1871.

Character of letters.	1870.		1871.		INCREASE.		DECREASE.		INCREASE.		DECREASE.	
	Number.	Amount, or nominal value.	Number.	Amount, or nominal value.	No.	Amount, or nominal value.	No.	Amount, or nominal value.	Per cent.	Per cent.	Per cent.	Per cent.
<b>Number of domestic letters received.</b>	3,932,045		3,973,075		41,030							
Number of foreign letters received	220,415		221,673		1,258			\$14,034 84	1.03			
Money letters containing one dollar and upward	23,321	\$92,667 62	18,577	\$78,812 98			3,744	\$14,034 84	0.56			16.77
Number delivered to owners	18,320	77,116 23	17,063	74,420 90			1,106	\$2,685 32				6.46
Number filed for reclamation, and outstanding	4,071	15,751 60	4,397	14,789 10	326				8.00			
<b>Money letters containing sums less than one dollar.</b>	22,992	\$5,793 00	14,956	\$3,808 72			8,038	\$1,964 68				34.95
Number delivered to owners	20,536	5,056 72	12,413	\$3,074 90			7,943	\$1,963 68				36.09
Number filed for reclamation	2,456	734 88	2,543	\$3,714 02			95	\$90 86				36.01
<b>Letters containing bills of exchange, deeds, &amp;c.</b>	17,860	\$3,075,544 90	19,183	\$3,075,860 23	1,323	\$284 33			7.46			
Number delivered to owners	16,968	\$2,953,400 02	17,905	\$2,853,030 31	1,037			108,369 71	6.14			
Number held for reclamation, and outstanding	892	\$112,144 88	1,288	\$20,838 92	396	\$108,064 04			96.53			6.11
<b>Letters and packages containing jewelry, books, &amp;c.</b>	6,921		6,498				423					6.06
Number delivered to owners	4,740		4,398				442					
Number held for reclamation	2,181		2,100		19				0.87			
<b>Letters containing photographs, postage-stamps, receipts, &amp;c.</b>	110,920		111,064		144				0.13			
Number delivered	100,015		101,514		1,499				1.49			
Number filed	10,905		9,550				1,355					12.48
<b>Letters without inclosures sent out for delivery.</b>	1,849,325		1,698,603				213,522					11.56
Number delivered	1,467,021		1,334,303				129,718					10.97
Number returned and destroyed	353,304		364,300				60,994					17.11
<b>Letters, circulars, &amp;c., destroyed.</b>	1,908,704		\$3,173,984		265,280				13.69			
Domestic letters returned from foreign countries	60,461		77,010		1,549				10.86			
<b>Foreign letters returned to countries from which they emanated.</b>	290,415		291,673		1,258				0.56			

W. H. H. TERRELL,  
Third Assistant Postmaster General.

## PAPERS ACCOMPANYING THE

*Statement exhibiting receipts and expenditures under appropriate heads, by quarters, for June*

## RECEIPTS.

	Quarter ended September 30, 1870.	Quarter ended December 31, 1870.	Quarter ended March 31, 1871.	Quarter ended June 30, 1871.
Letter postage.....	\$91,041 96	\$83,343 11	\$94,688 11	\$92,378 33
Newspapers and pamphlets.....	230,716 79	226,107 59	232,093 09	229,197 35
Registered letters.....				
Emoluments, (box-rent, &c.).....	943,995 74	939,534 87	948,151 52	951,315 13
Fines.....	1,325 63	1,370 00	53 00	70 72
Stamps sold.....	4,110,786 28	4,418,312 93	4,696,142 05	4,582,147 79
Dead letters.....	1,900 00	4,269 35	2,227 16	2,200 00
Internal revenue from postmasters ..	6,190 49	7 42		
Miscellaneous.....	2,594 24	5,913 80	4,388 08	3,754 96
Money-order funds deposited ..				
	4,678,481 15	4,978,859 07	5,278,640 91	5,101,064 29

Comparison, including deposits of money-order funds:

Increase of receipts over year ended June 30, 1869, \$1,692,534 70, or 8.68 per centum.

Increase of receipts over year ended June 30, 1870, 264,594 77, or 1.33 per centum.

## EXPENDITURES.

Compensation to postmasters.....	1,247,561 83	1,267,891 94	1,257,538 93	1,255,389 15
Ship, steamboat, and way letters.....	3,114 75	2,845 28	1,774 90	2,981 52
Transportation of the mails.....	2,932,130 60	3,342,474 84	3,554,126 71	3,840,961 93
Wrapping-paper.....	8,890 00	2,300 00	11,100 00	5,177 00
Office furniture.....	620 40	654 44	1,133 50	803 17
Advertising.....	17,714 81	31,288 39	7,049 11	1,407 49
Mail-bags and mail-bag catchers.....	48,401 37	38,935 76	33,823 36	35,413 00
Blank agent and assistants ..	1,299 57	1,945 32	1,988 95	2,837 14
Mail locks, keys, and stamps.....	19,809 04	15,279 29	39,635 41	5,402 39
Mail depredations and special agents.....	27,949 77	23,700 02	31,746 39	33,502 88
Clerks for offices.....	628,082 93	631,057 01	645,995 11	676,949 35
Postage-stamps and stamped envelopes.....	106,030 42	140,332 98	130,692 74	129,833 45
Letter-carriers.....	330,189 53	331,676 24	339,749 97	352,111 00
Dead letters.....				
Miscellaneous.....	115,211 29	129,751 98	117,616 25	168,144 19
Mails to North German Union.....	37,118 56	29,603 60		
Mails to Bremen.....				
Mails to France.....				
Mails to Great Britain.....	141,468 73		36,619 39	
Mails to Hamburg.....				
Mails to Prussia.....				
Mails to Belgium.....		1,489 31	4,593 74	
Money-order funds re-transferred.....				
	5,665,583 60	5,956,412 40	6,217,184 39	6,510,913 69

Comparison, including re-transfers of money-order funds:

Increase of expenditures over year ended June 30, 1869, \$991,972 52, or 2.91 per centum.

Increase of expenditures over year ended June 30, 1870, 391,268 45, or 1.63 per centum.

# REPORT OF THE POSTMASTER GENERAL.

747

the fiscal year ended June 30, 1871, compared with the fiscal years ended June 30, 1869, and 30, 1870.

## RECEIPTS.

Total year ended June 30, 1871.	Total year ended June 30, 1869.	Total year ended June 30, 1870.	Compared with year ended June 30, 1869.		Compared with year ended June 30, 1870.	
			Increase.	Decrease.	Increase.	Decrease.
\$361,451 51	\$419,828 85	\$413,751 70	.....	\$37,831 34	.....	\$52,300 19
909,015 72	778,899 30	835,737 99	\$130,133 43	.....	\$73,267 73	.....
.....	898 15	6 25	.....	898 15	.....	6 25
982,997 26	843,339 57	927,676 47	139,657 00	.....	55,190 79	.....
2,816 39	57 50	28,478 45	2,758 89	.....	.....	25,660 97
17,747,329 05	15,171,781 36	16,581,030 44	2,575,667 09	.....	1,166,336 61	.....
10,596 51	2,818 00	8,093 30	1,778 51	.....	2,573 21	.....
6,197 91	63,529 19	66,951 01	.....	57,331 89	.....	60,633 10
16,561 08	97,716 80	18,214 04	.....	11,135 79	.....	1,639 96
.....	1,630,335 00	892,843 00	.....	1,630,335 00	.....	892,843 00
20,037,045 42	18,344,510 72	19,772,220 65	2,649,996 19	1,157,461 49	1,297,320 34	1,038,495 57
.....	20,037,045 42	20,037,045 42	1,157,461 49	.....	1,038,495 57	.....
.....	1,698,534 70	264,894 77	1,672,534 70	.....	264,894 77	.....

Comparison, exclusive of deposits of money-order funds:  
Increase of receipts over year ended June 30, 1869, \$2,722,869 70, or 15.72 per centum.  
Increase of receipts over year ended June 30, 1870, 1,157,667 77, or 6.13 per centum.

## EXPENDITURES.

5,028,361 85	4,546,958 43	4,673,406 79	461,423 42	.....	354,915 06	.....
10,716 45	8,076 35	9,947 59	2,640 10	.....	1,468 86	.....
13,009,694 08	13,485,406 15	13,356,251 85	184,287 93	.....	313,442 23	.....
27,467 00	30,201 00	25,630 15	.....	2,734 80	1,936 85	.....
3,211 51	2,264 65	2,196 37	986 86	.....	1,013 14	.....
57,456 80	79,565 41	66,571 68	.....	22,105 61	.....	9,112 60
158,573 49	130,180 68	179,634 20	28,363 81	.....	.....	21,260 80
8,070 98	7,840 27	7,657 50	230 71	.....	213 49	.....
80,119 13	22,767 77	22,294 43	57,351 36	.....	57,894 70	.....
121,899 00	134,341 78	94,802 18	.....	13,448 78	27,006 62	.....
2,582,064 40	2,295,353 46	2,457,190 67	286,730 94	.....	194,683 73	.....
.....	.....	.....	.....	.....	.....	645 36
506,889 59	473,212 31	507,534 97	33,677 26	.....	.....	.....
1,353,926 83	1,183,915 31	1,231,340 68	170,011 52	.....	122,566 15	.....
.....	5 00	.....	.....	5 00	.....	.....
530,723 71	1,073,691 79	546,450 84	.....	542,968 01	.....	15,727 13
66,722 16	60,847 09	115,163 78	5,875 07	.....	46,441 60	.....
.....	40,045 07	.....	.....	40,045 07	.....	.....
.....	55,020 28	.....	.....	55,020 28	.....	.....
178,086 05	52,903 19	42,453 18	125,004 60	.....	129,634 67	.....
.....	.....	.....	.....	.....	.....	.....
6,076 05	15,416 58	4,648 56	.....	9,340 53	1,427 49	.....
.....	.....	650,000 00	.....	.....	650,000 00	.....
24,390,104 08	23,698,131 50	23,908,637 63	1,376,633 66	684,661 28	1,136,433 36	745,186 96
.....	24,390,104 08	24,390,104 08	684,661 28	.....	745,186 93	.....
.....	691,972 58	391,266 45	691,972 58	.....	391,266 45	.....

Comparison exclusive of re-transfers of money-order funds:  
Increase of expenditures over year ended June 30, 1869, \$1,231,979 58, or 5.41 per centum.  
Increase of expenditures over year ended June 30, 1870, 1,041,266 45, or 4.45 per centum.

W. H. H. TERRELL,  
Third Assistant Postmaster General.

Statement exhibiting receipts and expenditures under appropriate heads, by quarters, for June

## RECEIPTS.

	Quarter ended September 30, 1870.	Quarter ended December 31, 1870.	Quarter ended March 31, 1871.	Quarter ended June 30, 1871.
Letter postage.....	\$91,041 96	\$83,343 11	\$94,688 11	\$92,378 33
Newspapers and pamphlets.....	290,716 79	296,197 59	232,993 99	229,197 35
Registered letters.....				
Emoluments, (box-rent, &c.).....	243,995 74	239,534 87	248,151 52	251,315 13
Fines.....	1,325 63	1,370 00	50 00	70 73
Stamps sold.....	4,110,786 28	4,418,312 93	4,696,142 05	4,582,147 79
Dead letters.....	1,900 00	4,869 35	2,227 16	2,900 00
Internal revenue from postmasters.....	6,190 49	7 42		
Miscellaneous.....	2,594 94	5,913 80	4,388 08	3,754 96
Money-order funds deposited.....				
	4,678,481 15	4,978,659 07	5,278,640 91	5,101,064 20

Comparison, including deposits of money-order funds:

Increase of receipts over year ended June 30, 1869, \$1,692,534 70, or 8.68 per centum.

Increase of receipts over year ended June 30, 1870, 264,694 77, or 1.33 per centum.

## EXPENDITURES.

Compensation to postmasters.....	1,247,561 83	1,267,891 94	1,257,538 93	1,255,369 13
Ship, steamboat, and way letters.....	3,114 75	2,845 98	1,774 90	2,981 56
Transportation of the mails.....	2,932,130 60	3,342,474 84	3,554,126 71	3,940,961 93
Wrapping-paper.....	8,890 00	2,300 00	11,100 00	5,177 00
Office furniture.....	620 40	654 44	1,133 50	863 17
Advertising.....	17,714 81	31,288 39	7,049 11	1,497 49
Mail-bags and mail-bag catchers.....	48,401 37	38,935 76	35,923 36	35,413 00
Blank agent and assistants.....	1,299 57	1,945 32	1,988 95	2,837 14
Mail locks, keys, and stamps.....	19,809 04	15,279 29	39,635 41	5,402 39
Mail depredations and special agents.....	27,949 77	28,700 02	31,746 39	33,562 89
Clerks for offices.....	622,062 93	631,057 01	645,995 11	676,949 35
Postage-stamps and stamped envelopes.....	106,030 42	140,332 98	130,692 74	129,833 45
Letter-carriers.....	330,189 53	331,676 24	339,749 97	352,111 00
Dead letters.....				
Miscellaneous.....	115,211 29	129,751 98	117,616 25	168,144 19
Mails to North German Union.....	37,118 56	29,603 60		
Mails to Bremen.....				
Mails to France.....				
Mails to Great Britain.....	141,468 73		36,619 32	
Mails to Hamburg.....				
Mails to Prussia.....		1,492 31	4,593 74	
Mails to Belgium.....				
Money-order funds re-transferred.....				
	5,685,583 60	5,956,412 40	6,217,184 39	6,510,913 60

Comparison, including re-transfers of money-order funds:

Increase of expenditures over year ended June 30, 1869, \$991,972 58, or 2.91 per centum.

Increase of expenditures over year ended June 30, 1870, 391,366 45, or 1.63 per centum.

# REPORT OF THE POSTMASTER GENERAL.

747

the fiscal year ended June 30, 1871, compared with the fiscal years ended June 30, 1869, and 30, 1870.

## RECEIPTS.

Total year ended June 30, 1871.	Total year ended June 30, 1869.	Total year ended June 30, 1870.	Compared with year ended June 30, 1869.		Compared with year ended June 30, 1870.	
			Increase.	Decrease.	Increase.	Decrease.
\$361,451 51	\$419,929 85	\$413,751 70		\$37,631 34		\$52,309 19
909,015 72	778,059 30	835,727 80	\$130,153 42		\$73,977 73	
902,997 36	843,339 57	927,076 47	129,637 69	849 15	55,190 79	6 25
2,616 39	57 89	25,476 45	2,756 69			25,000 67
17,747,329 05	15,171,721 36	16,561,050 44	2,573,667 69		1,104,339 61	
10,506 51	2,818 00	8,023 30	1,778 51		2,573 21	
6,197 91	62,529 19	69,251 01		57,331 29		69,633 50
16,561 08	27,716 60	18,214 04		11,153 78		1,628 98
	1,039,335 00	992,943 00		1,039,335 00		992,943 00
20,637,045 42	18,344,510 78	19,772,220 65	2,292,906 19	1,157,461 40	1,297,309 34	1,032,495 57
	20,637,045 42	20,637,045 42	1,157,461 40		1,032,495 57	1,032,495 57
	1,002,534 70	994,994 77	1,678,534 70		994,994 77	

Comparison, exclusive of deposits of money-order funds:  
Increase of receipts over year ended June 30, 1869, \$2,723,609 70, or 15.72 per centum.  
Increase of receipts over year ended June 30, 1870, 1,157,667 77, or 6.13 per centum.

## EXPENDITURES.

5,028,361 85	4,546,956 43	4,673,466 79	481,413 42		354,915 06	
10,716 45	8,078 35	9,947 39	2,640 10		1,406 06	
13,009,694 04	13,465,406 15	13,336,251 65	104,867 93		213,449 23	
27,467 00	30,201 00	25,830 15		2,734 00	1,936 85	
2,211 51	2,204 65	2,199 37	936 86		1,013 14	
57,456 40	79,363 41	69,571 06		22,165 61		9,112 69
156,573 49	139,149 60	179,634 29	26,363 81			21,220 00
8,070 94	7,040 27	7,457 50	239 71		212 41	
98,119 13	22,767 77	24,264 43	57,351 36		57,094 70	
121,897 00	134,341 78	94,080 18		12,440 70	27,038 08	
2,592,064 40	2,403,353 46	2,457,190 67	206,730 94		194,089 73	
606,680 59	473,818 31	567,534 97	33,677 20			645 20
1,353,906 43	1,163,915 31	1,231,340 00	170,011 50		192,500 15	
	5 00			3 00		
530,723 71	1,073,691 78	546,450 44		546,936 01		13,727 15
66,722 16	60,247 60	115,163 78	5,675 67		60,441 02	
	60,045 97			60,045 97		
	55,980 20			55,980 20		
178,044 05	34,903 19	64,453 18	183,604 66		129,694 67	
6,976 05	15,416 56	4,640 56		9,340 53	1,467 40	
		630,080 00			630,080 00	
24,390,104 00	23,084,131 50	23,966,637 63	1,378,633 66	604,061 20	1,126,432 20	745,166 06
	24,390,104 00	24,390,104 00	604,061 20		745,166 06	
	601,978 56	301,208 45	601,978 56		301,208 45	

Comparison exclusive of re-transfers of money-order funds:  
Increase of expenditures over year ended June 30, 1869, \$1,251,978 20, or 5.61 per centum.  
Increase of expenditures over year ended June 30, 1870, 1,041,206 45, or 4.45 per centum.

W. H. H. TERRELL,  
Third Assistant Postmaster General.



# REPORT OF THE POSTMASTER GENERAL.

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Kansas	5,509	2,699	78,973	1,059	140,639	1,059,998	1,157,973	9,944,569	913,601
Nevada	1,738	1,739	100,495			529,978		594,978	100,495
California	8,643	6,999	419,317	1,308	977,747	9,139,947	1,041,661	9,471,539	755,064
Oregon	8,109	1,873	49,561			990,569		416,539	80,561
Washington Territory	9,681	1,300	109,619	1,301	45,854	313,040		392,964	148,973
Idaho Territory	855	855	91,938			395,400		395,400	91,938
Montana Territory	1,339	1,339	84,579			377,530		377,530	84,579
Dakota Territory	1,681	1,681	9,965			169,798		169,798	9,965
Wyoming Territory	108	108	9,666			31,006		31,006	9,666
Utah Territory	9,739	9,739	316,669			1,338,174	92,516	1,360,690	316,514
Colorado Territory	9,653	9,621	169,994	32	1,000	900,478	10,068	829,446	169,594
New Mexico Territory	1,763	1,763	313,324			661,009		661,009	313,324
Arizona Territory	1,435	1,405	64,659			395,690		325,064	64,659
Total	528,359	169,191	5,097,473	49,834	5,794,979	47,330,969	53,537,046	107,579,794	11,529,395
Railway post-office clerks									649,400
Route agents									671,240
Mail-route messengers									61,919
Local agents									58,639
Mail-messengers									453,393
Baggage-masters in charge of registered packages									1,113
Aggregate									13,404,961

JOHN L. ROUNTT,  
Second Assistant Postmaster General.

**Table showing the increase and decrease in mail transportation and cost during the year ended June 30, 1871.**

[illegible]



Nevada**	203	119,425	58,000	122	14,499	145,403	173,449	119,425
California**	640	4,314	58,410			120,336	47,000	
Oregon**	778	18,922	90			170,996	24,239	
Washington Territory**	47	35,697	25,654				43,331	
Idaho Territory**	225	25,465					65,000	
Montana Territory**	384		65,999			15,968		25,979
Nevada Territory**	194		1,528			70,772		1,528
Wyoming Territory**	106	9,666				30,690	9,666	
Utah Territory**	947	198,701		36	1,825	652,624	196,616	
Colorado Territory**	583	113,632			36	514,743	110,603	
New Mexico Territory**	197		4,502			125,934		4,502
Arizona Territory**			27,346				13,538	27,346
Alaska Territory	5,000		36,000				31,600	36,000
Total	7,117 5,736	487,831	508,956 467,851	6,167 6,167	4,509 5,061	11,510,537 960,750	962,750 491,337	491,337
	1,304		22,125	6,107	396,078	10,547,708	614,748	

\* Contract for carrying the mail by steamship from New York to San Francisco, Cal.

ferria, via Panama, expired.

† Carried principally by increased number of trips on railroads.

‡ Corrected disburse.

§ Sunday service discontinued.

|| Increased number of trips.

¶ No. 6263, Houston to Columbia, discontinued as railroad service, saving 26.6 miles, and service on No. 6264, Houston to Alvert, extended 39.5 miles, and that on No. 6265, Hallsville to Shreveport, extended 10 miles; in all, 66.5 miles.

\*\* (Men of the first year of new contract term.

†† Official report from railroad company shows but seven trips a week on the Union

Pacific Railroad this year, instead of twelve trips a week, as stated last year.

‡‡ Embroas route from Fort Towner to Sitka, Alaska.

§§ Transferred to Washington Territory.

JOHN L. ROUNT.

Second Assistant Postmaster General.

*Railway post offices, June 30, 1871.*

Terminal points.	Miles of route.	Miles of service.	Service each way.	No. of clerks—		
				\$1,400.	\$1,200.	\$1,000.
Atlanta, Ga., to Chattanooga, Tenn.	140	280	Daily	3	3	.....
Albany, N. Y., to Buffalo, N. Y.	398	1,192	Twice daily	9	8	6
Atlanta, Ga., to Augusta, Ga.	171	342	Daily	4	4	.....
Boston, Mass., to St. Albans, Vt.	230	581	Daily	4	4	.....
Boston, Mass., to Portland, Me.	111	444	Twice daily	4	4	.....
Boston, Mass., to Albany, N. Y.	200	800	Twice daily	6	9	.....
Boston, Mass., to Wellfleet, Mass.	122	244	Daily	5	5	.....
Boston, Mass., to South Berwick, Me.	74	148	Daily	3	3	.....
Boston, Mass., to Fitchburgh, Mass.	50	100	Daily	3	3	1
Bloomington, Ill., to Centralia, Ill.	136	272	Daily	3	3	.....
Bloomington, Ill., to St. Louis, Mo.	180	360	Daily	3	3	.....
Bristol, Tenn., to Chattanooga, Tenn.	942	484	Daily	4	4	.....
Burlington, Iowa, to Council Bluffs, Iowa	291	582	Daily	5	5	.....
Chicago, Ill., to Green Bay, Wis.	942	484	Daily	4	7	.....
Chicago, Ill., to Quincy, Ill.	263	526	Daily	5	8	.....
Chicago, Ill., to Dunleith, Ill.	188	376	Daily	4	4	.....
Chicago, Ill., to Iowa City, Iowa	237	474	Daily	7	6	.....
Chicago, Ill., to Clinton, Iowa	138	276	Daily	4	4	.....
Chicago, Ill., to Centralia, Ill.	258	516	Daily	4	6	.....
Chicago, Ill., to St. Louis, Mo.	280	560	Daily	4	5	.....
Chicago, Ill., to Toledo, Ohio	943	972	Twice daily	9	7	5
Centralia, Ill., to Cairo, Ill.	112	224	Daily	3	2	.....
Columbus, Ky., (by river) to Cairo, Ill.	21	168	4 times daily	1	.....	.....
Clinton, Iowa, to Council Bluffs, Iowa	350	700	Daily	3	3	.....
Cincinnati, Ohio, to St. Louis, Mo.	340	680	Daily	6	6	.....
Cleveland, Ohio, to Indianapolis, Ind.	282½	565	Daily	5	4	.....
Dubuque, Iowa, to Fort Dodge, Iowa	214	428	Daily	3	2	.....
Davenport, Iowa, to Council Bluffs, Iowa	307	614	Daily	4	4	.....
Detroit, Mich., to Chicago, Ill.	284	568	Daily	4	5	.....
Freeport, Ill., to Bloomington, Ill.	139	278	Daily	3	2	.....
Hornellsville, N. Y., to Dunkirk, N. Y.	128	256	Daily	4	4	.....
Indianapolis, Ind., to St. Louis, Mo.	261	522	Daily	4	4	.....
Kansas City, Mo., to Council Bluffs, Iowa	200	400	Daily	4	5	.....
Louisville, Ky., to Nashville, Tenn.	185	370	Daily	3	3	.....
Lafayette, Ind., to Quincy, Ill.	273	546	Daily	4	4	.....
Memphis, Tenn., to Chattanooga, Tenn.	310	620	Daily	5	6	.....
New York, N. Y., to Boston, Mass.	234	936	Twice daily	8	8	11
New York, N. Y., to Washington, D. C.	232	928	Twice daily	9	16	4
New York, N. Y., to Buffalo, N. Y.	422	1,688	Twice daily	11	11	7
New York, N. Y., to Albany, N. Y.	144	576	Twice daily	4	5	4
Omaha, Nebr., to Ogden, Utah	1,032	2,064	Daily	15	20	.....
Philadelphia, Pa., to Pittsburgh, Pa.	358	716	Daily	5	5	5
Peoria, Ill., to Burlington, Iowa	96	192	Daily	1	2	.....
Quincy, Ill., to St. Joseph, Mo.	206	412	Daily	4	5	.....
Rochester, N. Y., to Niagara Falls, N. Y.	77	154	Daily	3	3	.....
Toledo, Ohio, to Lafayette, Ind.	203	406	Daily	4	4	.....
Toledo, Ohio, to Buffalo, N. Y.	295	1,180	Twice daily	8	16	.....
Toledo, Ohio, to Elkhart, Ind.	132	528	Twice daily	3	3	.....
Washington, D. C., to Weldon, N. C.	216	864	Twice daily	8	8	.....

\* Included in New York and Buffalo.

NOTE.—In addition to this list, there is one head clerk, at \$1,400 per annum, detailed at San Francisco, California, in charge of route from San Francisco to Ogden.

#### RECAPITULATION.

Number of lines of railway post offices	.....	6
Aggregate number of miles of the above	.....	11,288
Number of miles actual service performed daily	.....	27,396
Number of miles actual service performed annually	.....	10,074,540
Number of head clerks at \$1,400 per annum	.....	212
Number of clerks at \$1,200 per annum	.....	258
Number of assistant clerks at \$1,000 per annum	.....	43

Making the total number of clerks	.....	513
With annual compensation amounting to	.....	\$649,400 00

JOHN L. ROUTT,  
Second Assistant Postmaster General.

*Statements showing operations and results of foreign mail service for the fiscal year ended June 30, 1871.*

The postages on United States and European mails were as follows:

The aggregate amount of postage (sea, inland, and foreign) on the mails exchanged—	
With the United Kingdom.....	\$564, 187 59
With the North German Union.....	527, 148 18
With France.....	6, 473 60
With Belgium.....	14, 043 76
With Netherlands.....	18, 505 12
With Switzerland.....	29, 704 68
With Italy.....	90, 994 48
<b>Total postages.....</b>	<b>1, 181, 057 41</b>

Being \$264,885 19 less than the amount reported for the previous year.

The postages on mails *sent* to Europe were as follows, viz:

To United Kingdom.....	\$293, 914 97
To North German Union.....	252, 721 96
To France.....	4, 735 40
To Belgium.....	6, 634 96
To Netherlands.....	9, 285 80
To Switzerland.....	14, 384 00
To Italy.....	8, 742 70
<b>Total.....</b>	<b>593, 429 78</b>

The postages on mails *received* from Europe were as follows:

From United Kingdom.....	\$370, 272 68
From North German Union.....	271, 436 28
From France.....	1, 738 80
From Belgium.....	7, 408 81
From Netherlands.....	9, 209 32
From Switzerland.....	15, 320 62
From Italy.....	12, 251 78
<b>Total.....</b>	<b>587, 627 63</b>

Postages collected in the United States.....	\$755, 724 39
Postages collected in Europe.....	425, 333 02

Excess of collections in the United States.....	330, 391 37
---	-------------

Number of letters sent from the United States.....	7, 415, 573
Number of letters received from Europe.....	6, 697, 987

<b>Total.....</b>	<b>14, 113 580</b>
-------------------	--------------------

Being an increase of 912,114 over the number reported for the previous year.

The excess of postages on mails *sent* from the United States to different countries of Europe, over that on mails *received* from the same countries, was as follows:

United Kingdom.....	\$23, 642 35
France.....	2, 997 20
Netherlands.....	86 48
<b>Total.....</b>	<b>26, 726 03</b>

The excess of postages on mails received over those sent was as follows:

North German Union.....	\$15, 704 26
Italy.....	3, 508 04
Switzerland.....	936 64
Belgium.....	773 86

<b>Total.....</b>	<b>20, 922 80</b>
-------------------	-------------------

*Number of letters and amounts of postage on mails conveyed to and from Europe by the following steamship lines :*

Name of line.	NUMBER OF LETTERS.			AMOUNTS OF POSTAGE ON MAILS.		
	Sent.	Received.	Total.	Sent.	Received.	Total.
Williams and Gulon line ..	2,597,883	257	2,598,140	\$201,266 79	\$12 32	\$201,279 11
Inman line .....	2,059,733	1,877,509	3,937,242	168,743 69	163,649 92	332,393 61
Hamburg line .....	848,229	328,664	1,176,886	70,730 50	22,900 32	99,630 82
Cunard line .....	942,017	3,683,444	4,625,461	78,227 88	320,494 79	398,722 67
North German Lloyd line ..	660,292	791,248	1,451,540	54,489 03	72,958 52	127,447 55
Canadian line .....	252,674	1,927	254,601	15,673 69	114 96	15,788 65
French line .....	40,349	14,968	55,317	4,034 90	1,496 80	5,531 70
W. H. Webb's line .....	2,633	.....	2,633	263 30	.....	263 30
Totals .....	7,403,803	6,698,017	14,101,820	593,429 78	587,627 63	1,181,057 41
Increase over 1870 .....	304,066	596,308	900,374	.....	.....	.....
Decrease from 1870 .....	.....	.....	.....	146,490 18	118,395 01	264,885 19

*Payments to ocean mail steamship lines performing service on basis of postage earnings during fiscal year ended June 30, 1871.*

Name of line.	Amount of compensation.
North German Lloyd .....	\$15,676 32
Hamburg American Packet Company .....	20,415 69
Inman Line .....	49,537 35
Cunard Line .....	22,178 81
Liverpool and Great Western Steam Company .....	60,805 38
Canadian Line .....	5,624 84
For steamship service to West Indies, Mexico, Honduras, &c .....	76,857 32
	<u>250,995 71</u>

#### FREE DELIVERY SYSTEM.

The free delivery system has been in operation during the year in fifty-two of the principal cities, with the following aggregate results :

Number of letter-carriers .....	1,419
Mail letters delivered .....	112,612,693
Local letters delivered .....	27,045,769
Newspapers delivered .....	32,610,353
Letters collected .....	113,287,602
Amount paid carriers, including incidental expenses .....	\$1,353,923 23
Postage on local matter .....	<u>\$758,120 78</u>

This shows the following increase as compared with last year :

Letter-carriers .....	57
Mail letters delivered .....	14,800,862
Local letters delivered .....	5,248,111
Newspapers delivered .....	4,743,330
Letters collected .....	15,496,556
Amount paid carriers, including incidental expenses .....	\$123,843 38
Postage on local matter .....	<u>\$76,256 08</u>

NOTE.—For full details of the operation of the system, see tabular statement accompanying Auditor's report.

The report of the appointment office shows the following :

Number of post-offices established during the year .....	2,407
Number discontinued .....	864
Increase .....	1,543
Number in operation on June 30, 1870 .....	<u>92,492</u>

# REPORT OF THE POSTMASTER GENERAL.

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Number in operation on June 30, 1871.....	30,045
Number to be filled by appointments of the President.....	1,178
Number to be filled by appointments of the Postmaster General.....	28,873

Appointments were made during the year :

On resignations.....	4,307
On removals.....	1,179
On changes of names and sites.....	178
On deaths of postmasters.....	309
On establishment of new post-offices.....	2,407

Total appointments..... 8,370

Number of cases acted on during the year..... 9,416

Total operations of the Appointment Office for the year ended June 30, 1871.

States and Territories.	Post-offices.				Postmasters.			Total number of changes.
	Established.	Discontinued.	Names and sites changed.	Appointments on change of name and site.	Resigned and commissions expired.	Removed.	Deceased.	
Alabama.....	86	66	8	3	81	39	5	265
Alaska.....						1		1
Arizona.....	6	1			6	3	1	17
Arkansas.....	91	13	8	7	110	23	8	263
California.....	67	17	15	8	76	17	6	218
Colorado.....	21	5	6	9	31	5	1	69
Connecticut.....	4	1	1	1	41	6	3	56
Dakota.....	11	3	1	1	9	5		29
Delaware.....	8	1			7	1	2	19
District of Columbia.....					2			2
Florida.....	35	18	5	1	25	17	2	102
Georgia.....	59	40	2		57	16	3	177
Idaho.....	9	1			3			13
Illinois.....	107	43	31	12	254	67	11	513
Indiana.....	63	28	11	7	278	44	15	439
Iowa.....	130	28	24	8	240	38	7	467
Kansas.....	197	40	29	15	176	42	7	491
Kentucky.....	69	50	4	3	169	49	17	358
Louisiana.....	33	7	5	3	34	20	3	102
Maine.....	10	11	3		29	12	10	129
Maryland.....	35	13	9	8	59	12	12	123
Massachusetts.....	9	1	5	2	59	10	12	96
Michigan.....	54	29	21	13	137	48	7	266
Minnesota.....	71	24	11	7	116	37		259
Mississippi.....	101	34	4	1	62	22	5	226
Missouri.....	176	50	14	5	267	59	13	599
Montana.....	16	6	2		19	1		26
Nebraska.....	10	13	15	9	60	14	3	175
Nevada.....	9	10	1		19	2		41
New Hampshire.....	5	1			23	6	4	39
New Jersey.....	29	4	4	1	55	15	5	111
New Mexico.....	7	1			12	2		23
New York.....	62	14	17	4	222	114	39	461
North Carolina.....	77	53	3		78	22	8	241
Ohio.....	44	22	9	4	270	65	19	429
Oregon.....	24	6	1		26	7	1	65
Pennsylvania.....	86	37	44	27	317	73	24	569
Rhode Island.....	2		2	1	13	4	1	22
South Carolina.....	45	35	3		38	20	4	145
Tennessee.....	107	21	9	6	129	50	12	326
Texas.....	112	37	6	5	130	49	8	344
Utah.....	18	2	1	1	19	3	1	44
Vermont.....	12	2	1		47	7	4	73
Virginia.....	108	28	7	3	148	59	11	361
Washington.....	16	1	1	1	18	3		39
West Virginia.....	41	15	5	1	92	25	6	194
Wisconsin.....	43	16	12	7	149	31	14	297
Wyoming.....	1	4	1	1	9	4	1	1
Total.....	2,407	854	360	178	4,307	1,179	309	

*Statement of the postal receipts and expenditures of*

States and Territories.	Letter postage.	Newspaper postage.	Waste paper and twine.	Stamps sold.	Emoluments.	Revenue tax.	Receipts.
Maine	\$4,786 69	\$21,833 89	\$104 24	\$334,350 29	\$16,878 94	\$117 30	\$378,071 35
New Hampshire	1,836 91	14,790 21	81 29	191,412 81	8,643 90	71 29	216,836 92
Vermont	2,082 50	14,372 91	50 23	188,512 41	6,004 72	52 72	211,073 49
Massachusetts	20,235 05	47,123 70	465 27	1,383,699 50	82,975 82	409 67	1,534,900 01
Rhode Island	1,833 00	5,473 50	45 60	148,146 27	13,557 71	51 14	169,127 22
Connecticut	4,777 38	21,474 72	156 56	429,197 29	24,344 71	166 19	450,116 85
New York	109,757 28	117,962 07	700 66	3,947,744 75	154,258 04	1,009 20	4,331,432 00
New Jersey	8,679 52	17,420 02	132 22	353,793 09	17,942 33	151 40	398,118 58
Pennsylvania	29,641 48	84,010 99	873 07	1,810,649 73	65,646 62	479 03	1,991,300 92
Delaware	319 65	2,621 60	.....	50,975 59	707 04	12 62	54,636 50
Maryland	8,324 32	13,476 12	121 44	353,529 26	7,426 77	101 61	383,179 52
Virginia	1,967 44	17,783 93	63 64	280,971 88	10,888 04	120 91	311,795 84
West Virginia	780 97	7,490 95	67 65	94,334 24	3,214 12	29 06	105,916 99
North Carolina	877 48	9,290 08	5 53	117,756 89	5,231 75	41 45	133,203 18
South Carolina	1,233 44	6,722 51	14 68	106,109 28	7,144 90	31 43	121,249 24
Georgia	1,974 71	14,637 82	101 25	236,250 88	22,695 14	108 97	275,768 77
Florida	991 43	2,019 06	.....	38,374 17	3,327 25	18 95	44,730 86
Ohio	13,923 75	76,195 72	730 01	1,201,583 14	61,462 56	406 13	1,354,301 31
Michigan	13,396 65	38,763 50	326 41	542,099 66	39,526 77	259 90	634,972 89
Indiana	4,977 35	41,550 10	177 06	486,497 56	33,677 01	231 66	569,110 74
Illinois	32,198 44	71,687 52	815 25	1,451,006 91	80,551 33	496 62	1,636,756 07
Wisconsin	14,549 82	30,146 02	177 12	401,217 26	28,585 92	182 30	474,859 04
Iowa	10,201 34	34,177 01	142 08	470,713 00	40,404 65	243 83	555,881 91
Missouri	9,919 70	38,693 07	212 86	630,975 76	27,594 40	160 32	707,556 11
Kentucky	3,270 37	17,867 73	142 62	296,877 34	12,868 75	113 04	331,139 85
Tennessee	2,416 33	15,409 22	108 96	237,580 63	9,558 39	94 47	265,168 00
Alabama	1,422 42	9,633 60	64 63	150,069 11	13,650 02	49 27	174,889 05
Mississippi	1,214 28	7,316 02	19 88	123,792 82	10,398 66	60 74	142,802 40
Arkansas	873 57	4,426 80	13 72	67,872 46	5,273 85	25 70	78,486 10
Louisiana	9,389 62	7,851 38	1 25	225,523 83	25,879 75	56 13	268,711 96
Texas	3,870 12	15,258 96	55 92	194,023 11	19,987 94	122 40	223,318 45
California	15,019 41	27,504 38	191 80	432,371 96	37,646 84	220 04	512,954 43
Oregon	336 36	4,129 73	.....	38,984 95	5,221 35	18 93	48,691 32
Minnesota	14,493 94	15,251 15	76 35	185,130 31	14,445 94	82 56	229,480 25
Kansas	2,799 17	12,497 81	14 84	208,524 54	18,326 94	86 11	242,249 41
Nebraska	1,484 59	4,588 77	2 11	73,930 55	7,407 14	16 00	87,429 16
Nevada	381 51	4,340 02	.....	33,741 04	5,754 00	40 77	44,257 34
Colorado	360 11	2,639 20	1 00	38,097 37	10,435 90	41 64	51,575 27
Utah	555 12	2,390 48	15 16	23,723 61	2,758 25	15 37	29,457 99
New Mexico	85 14	462 30	5 00	9,015 40	427 75	13 85	10,629 47
Washington	106 32	1,246 91	.....	10,374 81	908 40	84	12,637 28
Dakota	507 56	768 00	.....	9,941 76	563 77	84	11,781 93
Arizona	15 93	135 51	.....	5,306 04	138 00	.....	5,595 48
Idaho	101 21	842 40	.....	8,928 52	1,627 75	5 05	11,504 93
Montana	224 95	1,412 65	20	19,665 83	5,890 50	18 95	27,213 08
District of Columbia	2,804 02	3,226 57	355 07	110,755 99	6,840 52	105 42	124,087 59
Alaska	8 20	15 15	.....	182 96	.....	.....	206 31
Wyoming	75 45	771 42	.....	12,577 32	1,733 95	14 21	15,172 35
Deduct miscellaneous items	361,302 00	909,723 78	6,632 63	17,767,487 88	982,432 80	6,156 57	20,033,735 66
Add miscellaneous items	149 51	708 06	.....	20,098 83	564 46	41 34	20,051 58
Total	361,451 51	909,015 72	6,632 63	17,747,389 05	982,997 26	6,197 91	20,013,684 08

NOTE.—The following items of expenditure and revenue are not embraced in the above statement:

Amount paid for foreign mails and expenses of Government agents	\$1,061,985 67
Route agents, &c.	1,321,604 33
Mail messengers and supply of special offices	441,114 21
Foreign postage collected and returned to foreign governments	250,886 26
Ship, steamboat, and way letters	10,716 45
Wrapping-paper	27,467 00
Office furniture	478 22
Advertising	52,067 35
Mail bags	96,448 70
Blank agents and assistants	8,070 98
Mail locks, keys, and stamps	80,119 13
Mail depredations and special agents	121,899 00
Clerks for offices	16,502 04
Compensation to letter-carriers	1,353,926 83

OFFICE OF THE AUDITOR OF THE TREASURY  
FOR THE POST-OFFICE DEPARTMENT, October 17, 1871.

# REPORT OF THE POSTMASTER GENERAL.

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the United States for the fiscal year ended June 30, 1871.

Compensation of postmasters.	Incidental expenses of post-offices.	Compensation and incidental expenses.	Transportation by States.	Expenses.	Excess of expenditures over receipts.	Excess of receipts over expenditures.
\$134,692 50	843,070 73	\$177,733 93	\$148,156 98	\$325,892 21	.....	\$32,179 14
92,353 50	14,856 83	107,210 43	67,399 86	174,610 41	.....	42,236 51
98,879 20	12,072 03	110,951 25	115,951 01	226,202 26	\$15,228 77	735,234 19
298,670 49	237,285 66	535,956 15	263,709 67	798,665 82	.....	94,172 88
33,495 31	16,948 27	50,443 58	24,510 76	74,954 34	.....	146,187 60
141,233 21	53,811 45	197,044 66	136,884 59	333,929 25	.....	2,123,654 60
613,071 32	874,923 80	1,487,995 39	719,781 99	2,207,777 31	.....	71,131 21
136,435 45	29,233 12	165,668 57	161,318 80	326,987 37	.....	745,434 49
449,163 75	262,312 98	711,481 73	824,384 70	1,243,868 43	.....	6,228 51
18,280 02	4,569 18	22,849 20	25,560 79	48,409 90	.....	.....
65,670 61	73,666 81	139,337 42	253,169 04	392,506 46	9,326 94	.....
105,289 44	47,103 73	152,393 17	279,994 71	432,387 88	120,592 04	.....
41,628 63	17,039 62	58,668 25	80,475 56	139,143 81	33,226 82	.....
57,031 50	12,364 84	69,396 43	157,003 89	226,400 32	93,197 14	.....
37,023 75	12,638 61	49,662 36	140,330 10	189,962 46	68,733 22	.....
77,290 63	40,845 38	118,136 01	197,453 39	315,589 40	39,820 63	.....
18,775 24	4,984 20	23,759 44	193,664 88	217,424 32	172,893 46	.....
368,089 17	163,619 98	531,709 15	766,049 03	1,297,757 18	.....	56,544 13
218,246 46	77,493 43	295,739 80	353,949 88	649,629 77	14,716 88	.....
213,667 11	85,864 42	299,531 53	334,349 82	633,881 35	64,770 61	.....
407,384 50	231,489 36	638,873 86	601,969 39	1,240,833 25	.....	395,899 89
178,390 72	47,200 43	225,591 15	253,093 16	478,684 31	3,825 27	.....
213,719 84	46,515 03	260,234 87	217,765 76	478,000 63	.....	77,681 98
162,018 88	104,263 46	266,282 34	465,927 89	732,110 23	24,554 19	.....
98,961 00	41,938 73	140,919 73	942,676 35	383,596 03	52,456 23	.....
75,269 53	47,285 00	123,154 53	111,683 25	224,837 72	.....	30,330 22
50,037 35	22,037 09	72,074 44	253,224 74	325,299 18	150,410 13	.....
61,396 83	10,431 93	71,828 76	193,440 30	965,969 06	122,466 66	.....
31,738 64	11,063 49	42,802 13	274,734 66	317,536 99	229,050 89	.....
27,488 89	53,501 41	80,990 30	250,643 92	331,634 22	62,922 26	.....
77,899 97	31,777 77	109,677 74	594,814 11	634,421 85	401,103 40	.....
88,578 95	86,519 11	175,098 06	774,874 90	949,972 96	437,018 53	.....
17,856 19	6,129 31	24,038 50	84,377 88	102,416 38	59,725 06	.....
81,136 28	23,918 06	105,054 34	178,557 30	283,611 64	54,131 39	.....
75,904 25	24,445 83	100,350 08	178,975 51	272,625 59	36,376 18	.....
25,705 41	17,483 41	43,186 82	334,185 47	137,374 29	289,945 13	.....
19,079 26	10,862 45	29,941 71	104,867 69	134,409 40	90,559 06	.....
20,994 67	9,208 85	30,203 52	130,513 70	169,717 22	118,149 00	.....
13,022 13	5,407 45	18,429 56	291,078 38	309,507 96	280,049 97	.....
7,403 88	375 00	7,778 88	228,192 83	233,971 71	223,942 24	.....
6,504 90	508 03	7,012 93	117,639 11	124,632 04	112,014 76	.....
5,064 52	101 00	5,165 52	12,813 12	17,988 64	6,216 71	.....
2,582 53	210 00	2,792 53	43,048 50	45,841 03	40,245 55	.....
4,795 42	603 00	5,398 42	59,569 55	64,967 97	53,463 04	.....
11,360 97	5,509 05	16,870 02	78,224 79	95,094 81	67,881 73	.....
6,674 75	107,062 14	113,736 89	.....	113,736 89	.....	10,350 70
279 58	.....	279 58	.....	279 58	73 27	.....
8,688 63	2,710 11	11,398 74	10,196 68	21,585 42	6,423 07	.....
4,999,471 05	3,035,314 69	8,034,785 74	10,977,399 71	19,012,185 45	3,565,896 16	4,587,446 37
.....	.....	.....	.....	.....	.....	20,051 36
28,910 80	.....	28,910 80	19,991 01	48,901 81	48,901 81	.....
5,098,361 85	3,035,314 69	8,063,696 54	10,997,390 72	19,061,087 96	3,614,797 97	4,567,394 79

Expenses, postage-stamps, and stamped envelopes	\$308,889 59
Dead letters, "moneys refunded"	.....
Miscellaneous payments	131,245 91
.....	5,481,521 67
Excess of receipts brought down	\$952,596 82
Excess of transportation accrued	152,500 85
Receipts on account of dead letters	10,506 51
Receipts on account of fines	2,816 38
Receipts on account of miscellaneous	9,948 45
Total excess of expenditures over receipts	4,353,062 66
.....	5,481,521 67

J. J. MARTIN, Auditor.

Statement of the operations of the letter-carrier system for the year ended June 30, 1871.

Name of office.	State.	Number of letters collected.	Mail letters delivered.	Local letters delivered.	Newspapers delivered.	Amount of local postage.	Am't paid carriers, including incl. dental expenses.
Albany.....	New York	1,324,864	1,732,101	164,025	530,678	\$5,063 00	\$22,084 04
Allegany.....	Pennsylvania	324,356	607,536	63,097	302,354	2,309 40	6,711 22
Baltimore.....	Maryland	4,873,628	618,591	1,016,106	1,071,546	19,374 22	54,631 87
Boston.....	Massachusetts	7,953,399	5,343,179	369,297	570,432	47,543 75	67,378 36
Brooklyn.....	New York	1,103,118	4,467,339	279,521	794,762	9,470 34	38,357 13
Buffalo.....	do	1,470,695	3,279,521	361,608	391,808	31,057 33	31,057 33
Cambridge.....	Massachusetts	81,588	357,134	31,640	134,031	632 89	3,899 96
Cambridgeport.....	do	99,493	321,939	15,677	105,666	358 87	3,092 99
Charleston.....	do	340,144	447,016	11,497	146,538	579 60	4,272 70
Chicago.....	Illinois	10,036,667	11,275,205	1,524,018	335,674	38,685 17	103,896 47
Cincinnati.....	Ohio	2,821,014	4,131,290	593,073	643,902	18,791 08	50,146 75
Cleveland.....	do	1,751,732	2,569,266	224,512	865,887	6,531 66	22,098 57
Dayton.....	do	567,024	788,822	61,215	360,821	1,690 38	9,583 14
Detroit.....	Michigan	1,148,200	2,614,063	295,387	933,955	6,273 82	21,044 36
Erie.....	Pennsylvania	175,443	431,757	43,308	341,921	1,200 38	5,761 00
Hartford.....	Connecticut	110,344	306,494	23,014	116,411	924 64	3,383 00
Indianapolis.....	Indiana	380,699	666,733	81,057	228,631	3,313 14	7,953 60
Jacoby City.....	New Jersey	1,444,596	1,944,408	30,057	148,740	391 66	16,296 51
Lawrence.....	Pennsylvania	225,879	566,216	30,057	120,988	923 84	5,698 15
Lawrence.....	Massachusetts	111,491	348,338	24,719	184,013	634 96	4,499 70
Lancaster.....	do	413,469	1,184,013	236,297	610,664	5,064 91	22,467 17
Louisville.....	Kentucky	1,499,856	2,554,909	285,335	191,535	979 41	5,000 00
Lowell.....	Massachusetts	430,810	236,336	16,614	146,109	648 23	4,856 64
Lynn.....	do	358,628	412,165	53,525	208,985	565 57	5,445 83
Manchester.....	New Hampshire	208,453	436,515	18,393	317,484	1,804 81	8,899 90
Memphis.....	Tennessee	879,169	1,130,168	109,393	433,735	3,089 05	21,914 70
Millwaukee.....	Wisconsin	1,022,532	1,718,308	48,761	270,111	1,784 44	7,630 66
Nashville.....	Tennessee	387,632	1,435,500	298,494	547,301	4,661 78	18,287 03
Newark.....	New Jersey	865,835	1,303,140	14,113	97,796	986 99	4,820 49
New Bedford.....	Massachusetts	241,226	303,090	75,028	311,559	3,709 47	8,029 00
New Haven.....	Connecticut	360,728	519,066	70,475	11,499	2,945 34	23,733 07
New Orleans.....	Louisiana	857,854	23,028,449	12,138,912	5,460,197	362,483 30	225,954 81
New York.....	New York	40,556,514	11,531,715	5,282,905	4,468,674	130,065 81	175,981 20
Philadelphia.....	Pennsylvania	14,421,292	11,497,092	3,240,550	282,074	1,679 83	7,212 35
Portland.....	Maine	786,535	1,501,181	174,807	237,864	5,241 97	16,520 83
Pittsburgh.....	Pennsylvania	1,343,592	1,743,162	132,025	270,530	5,326 10	11,375 88
Providence.....	Rhode Island	356,792	743,162	41,224	213,922	832 30	5,011 59
Reading.....	Pennsylvania	322,778	431,981	41,224	213,922	832 30	5,011 59



## REPORT OF THE POSTMASTER GENERAL.

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Richmond	Virginia	559,403	960,203	54,443	903,394	1,086,36	10,890,05
Brookline	New York	1,096,500	2,042,486	151,215	642,836	5,519,85	18,604,46
St. Louis	Massachusetts	3,919,539	7,302,116	717,513	3,977,378	16,071,87	56,397,53
Salem	Massachusetts	371,689	324,360	98,400	1,132,649	16,731,79	5,073,53
San Francisco	California	1,144,601	877,764	175,738	948,689	91,858,55	91,858,55
Syracuse	New York	1,556,843	135,579	135,579	901,198	5,597,58	91,858,55
Trenton	New Jersey	1,442,314	1,556,843	391,083	97,711	3,738,48	91,858,55
Toledo	Ohio	354,378	818,775	38,010	193,775	1,093,86	3,738,48
Troy	New York	879,453	818,775	40,849	1,501,34	1,501,34	8,409,94
Utica	do	675,757	1,379,388	40,849	1,379,388	1,379,388	11,003,54
Washington	District of Columbia	697,965	1,904,869	131,548	307,716	11,594,90	11,594,90
Williamamburgh	New York	1,375,459	1,484,616	175,483	618,892	4,502,85	98,475,77
Wilmington	Delaware	483,110	1,143,145	90,574	966,043	5,009,96	10,415,76
Worcester	Massachusetts	985,764	610,935	60,850	329,409	6,657,60	6,657,60
		963,491	460,058	51,953	176,560	5,950,87	5,949,33
		113,397,009	119,619,663	37,045,700	39,610,333	759,190,76	1,351,228,23
Salary of J. H. Briggs, special ag't P. O. D., paid out of the appropriation for letter-carriers.							5,993,00
Total.							1,353,923,23

**J. J. MARTIN, Auditor.**

**OFFICE OF THE AUDITOR OF THE TREASURY  
FOR THE POST-OFFICE DEPARTMENT, October 17, 1871.**

OFFICE OF THE AUDITOR OF THE TREASURY

*Statement showing the transactions of the money-order office of the United States for the fiscal year ending June 30, 1871.*

States and Territories.	No. of or- ders issued.	Balance from last year.	Amount of orders issued.	Revenue.		Drafts and de- posits received.	Balance due post- masters.	Transferred from postage fund.	Transferred from Swiss fund.	No. of or- ders paid.
				Total fees re- ceived.	Premiums.					
Maine.....	34, 671	\$11, 098 41	\$795, 767 45	\$5, 109 15		\$447, 989 00	\$458 98	\$11, 883 32		35, 863
New Hampshire.....	20, 818	3, 117 35	384, 299 88	2, 754 52		53, 850 00	327 00	10, 948 97		15, 005
Vermont.....	25, 038	5, 810 78	423, 516 96	3, 050 55		47, 875 00	2 45	12, 816 38		14, 187
Massachusetts.....	74, 137	11, 678 93	1, 519, 916 41	10, 364 33		90, 107 03	49 83	43, 858 73	\$1, 135 53	124, 121
Rhode Island.....	11, 065	1, 331 36	211, 979 33	1, 480 95		56, 389 69	9 18	3, 384 50	210 77	8, 923
Connecticut.....	6, 434 24	37, 916	654, 461 01	4, 859 70		348, 705 00	25 88	16, 788 86		36, 325
New York.....	136, 245	128, 707 16	2, 771, 069 04	20, 335 65		9, 595, 308 60	351 02	62, 152 03	9, 109 09	420, 383
New Jersey.....	30, 284	6, 947 58	538, 389 62	3, 866 30		83, 925 00	182 61	25, 539 19	734 87	25, 614
Pennsylvania.....	33, 052	33, 229 36	2, 363, 924 95	17, 509 70		1, 634, 993 09	153 13	50, 283 53	223 30	170, 164
California.....	44, 447	35, 965 97	1, 356, 664 99	7, 803 15		949, 215 00	18 46	4, 069 00	545 05	21, 590
Oregon.....	12, 105	12, 837 04	1, 327, 946 19	2, 071 65		2, 392, 553 44	458 34	63, 684 81	607 51	3, 879
Idaho.....	29, 314 09	3, 043 167 43	3, 043 167 43	25, 325 60		4, 050 00	5 53	4, 384 00		307, 047
Delaware.....	5, 910	1, 333 91	103, 385 32	3, 773 60		641, 536 45	1 55	4, 206 67		3, 742
Alabama.....	21, 948	1, 637 73	523, 965 16	3, 333 75		3, 651, 384 83	134 00	50, 496 67		11, 578
Georgia.....	223, 194	46, 346 62	3, 975, 314 88	20, 011 80		3, 481, 673 55			1, 299 90	270, 375
Florida.....	18, 152	7, 502 71	396, 791 63	2, 571 35		731, 675 55			631 00	21, 072
District of Columbia.....	10, 315	30, 565 06	1, 875, 635 90	13, 616 85		997, 689 56	29 56	32, 449 75		68, 846
Michigan.....	94, 569	42, 517 97	1, 884, 959 79	13, 119 70	\$43 93	1, 974, 888 14	149 08	19, 351 35	464 97	112, 559
Wisconsin.....	19, 654	7, 656 90	353, 420 21	2, 928 55		54, 550 00		695 00		8, 868
West Virginia.....	2, 656 90	10, 773 66	736, 123 92	4, 745 12		117, 968 00		1, 066 01	120 55	7, 193
Alabama.....	25, 745	32, 967 11	643, 090 99	4, 807 50		409, 068 00		30 00		1, 029
Arkansas.....	25, 745	32, 967 11	643, 090 99	4, 807 50		409, 068 00		30 00		7, 193
Florida.....	32, 963	10, 983 05	574, 308 72	8, 186 80		132, 881 07	16 76	60 00	10 10	18, 938
Georgia.....	16, 913	8, 095 54	814, 000 82	3, 979 80		592, 949 00	9 54	689 00		30, 557
Kentucky.....	44, 934	6, 695 54	814, 000 82	3, 979 80		444, 890 31	15 05	9, 492 45	415 70	91, 728
Louisiana.....	23, 778	24, 917 49	633, 064 03	3, 878 85		980, 976 74	14 07	4, 005 96		47, 140
Maryland.....	97, 722	12, 316 24	545, 143 52	3, 853 85	69 34	789, 162 81	16 85	2, 880 34		5, 719
Massachusetts.....	27, 057	5, 403 03	589, 749 90	4, 025 98		86, 273 00		900 00	19 69	7, 983

# REPORT OF THE POSTMASTER GENERAL.

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States and Territories.	Amount of orders paid.	Amount of orders re-paid.	Transferred to postage fund.	Transferred to Postmaster General's money order account.	Transferred to Swiss fund.	Deposited.	Expenses.	Commissions and clerk hire.	Balance due the United States.	Miscellaneous items.
<b>Texas</b>	22,792	12,528 65	654,543 31	4,005 65	577 53	34,868,337 36	3,690 76	576,651 97	90,560 67	9,121,664
Alabama	47,913	19,634 51	919,778 01	6,319 75		261,404 60	19 36	4,634 68	543 93	6,198
Arkansas	131,859	87,150 55	2,874,770 32	14,943 70		519,669 56	89 13	14,001 67	50 00	90,963
California	53,819	53,189 39	1,814,898 65	7,975 55		754,468 10	134 90	81,374 19	760 06	67,772
South Carolina	15,005	4,118 46	2,281,033 43	2,914 10		262,410 00	50 19	31,338 14		33,327
<b>Total</b>	2,151,794	689,146 94	42,164,118 03	285,906 15	577 53	34,868,337 36	3,690 76	576,651 97	90,560 67	9,121,664
States and Territories.	Amount of orders paid.	Amount of orders re-paid.	Transferred to postage fund.	Transferred to Postmaster General's money order account.	Transferred to Swiss fund.	Deposited.	Expenses.	Commissions and clerk hire.	Balance due the United States.	Miscellaneous items.
<b>Maine</b>	671,113	62,840 67	9120 00			6544,873 00	663 00	62,819 98	89,900 96	9159 50
New Hampshire	200,125 77	1,844 75	314 11			139,993 00	6 96	1,847 44	2,729 06	115 04
Vermont	204,439 79	2,565 20	1,00 46			139,993 00	15 00	1,122 92	5,419 97	18 61
Massachusetts	125,905 81	10,471 06	5,457 00		698 16	47,331 44	13 40	8,649 62	12,461 30	16 56
Rhode Island	253,603 81	1,067 46			50 00	47,331 44	57 00	654 06	7,033 74	69 41
Connecticut	341 47	2,360 96	2,120 00		50 00	33,975 00	57 00	2,113 97	908,394 46	241 49
New York	788,181 55	90,256 96	168,983 61	604,000 00	1,035 80	5,123,549 71	1,919 30	20,570 71	32,777 10	299 80
New Jersey	207,531 52	4,633 91	168,983 61		85 00	5,123,549 71	7 00	10,712 69	32,701 10	61 14
Pennsylvania	274,977 44	90,100 00	111 00		00 00	1,164,080 56	71 67	7,007 03	12,463 00	7 67
California	770,898 19	7,537 24	5,756 62		191 69	4,584,097 00	94 50	31,664 67	34,664 51	316 04
Oregon	180,028 09	2,374 67	94,675 00		338 73	1,561,650 63	137 69	12,656 74	1,067 59	
Idaho	27,510 92	22,974 84	94,675 00			38,658 00	13 75	431 01	11,145 61	
Delaware	77,510 01	2,035 36	963 56			856,750 00	1 00	1,063 99	56,563 51	88 76
Nebraska	310,374 69	32,093 67	7,660 56		67 80	2,570,153 94	2,006 96	17,653 93	7,739 41	
Illinois	4,005,644 19	2,746 13			260 00	697,439 00	1,568 15	2,768 65	46,978 53	
District of Columbia	4,468,718 75	15,043 99	1,755 41			1,474,109 69	468 15	9,327 30	54,164 54	181 35
Maryland	2,388,109 67	15,766 76	2,731 46		689 91	1,150,633 54	3 75	9,076 68	2,065 36	56 80
West Virginia	174,969 90	2,115 80				256,633 54	270 65	1,159 53	12,943 16	
Alabama	906,019 55	6,953 96	353 09			577,063 00	453 15	2,003 39	2,065 36	
Arkansas	603,033 71	6,446 26				1,021,651 00	379 80	2,169 26	29,794 51	
Florida	433,599 94	2,691 65				561,449 00	89 55	1,401 98	45,754 51	
Georgia	433,599 94	2,691 65				561,449 00	89 55	1,401 98	45,754 51	
Louisiana	433,599 94	2,691 65				561,449 00	89 55	1,401 98	45,754 51	
Mississippi	433,599 94	2,691 65				561,449 00	89 55	1,401 98	45,754 51	
North Carolina	433,599 94	2,691 65				561,449 00	89 55	1,401 98	45,754 51	
South Carolina	433,599 94	2,691 65				561,449 00	89 55	1,401 98	45,754 51	
Tennessee	433,599 94	2,691 65				561,449 00	89 55	1,401 98	45,754 51	
Alabama	433,599 94	2,691 65				561,449 00	89 55	1,401 98	45,754 51	
Arkansas	433,599 94	2,691 65				561,449 00	89 55	1,401 98	45,754 51	
California	433,599 94	2,691 65				561,449 00	89 55	1,401 98	45,754 51	
Colorado	433,599 94	2,691 65				561,449 00	89 55	1,401 98	45,754 51	
Connecticut	433,599 94	2,691 65				561,449 00	89 55	1,401 98	45,754 51	
Delaware	433,599 94	2,691 65				561,449 00	89 55	1,401 98	45,754 51	
District of Columbia	433,599 94	2,691 65				561,449 00	89 55	1,401 98	45,754 51	
Florida	433,599 94	2,691 65				561,449 00	89 55	1,401 98	45,754 51	
Georgia	433,599 94	2,691 65				561,449 00	89 55	1,401 98	45,754 51	
Idaho	433,599 94	2,691 65				561,449 00	89 55	1,401 98	45,754 51	
Illinois	433,599 94	2,691 65				561,449 00	89 55	1,401 98	45,754 51	
Indiana	433,599 94	2,691 65				561,449 00	89 55	1,401 98	45,754 51	
Iowa	433,599 94	2,691 65				561,449 00	89 55	1,401 98	45,754 51	
Kansas	433,599 94	2,691 65				561,449 00	89 55	1,401 98	45,754 51	
Kentucky	433,599 94	2,691 65				561,449 00	89 55	1,401 98	45,754 51	
Louisiana	433,599 94	2,691 65				561,449 00	89 55	1,401 98	45,754 51	
Maine	433,599 94	2,691 65				561,449 00	89 55	1,401 98	45,754 51	
Maryland	433,599 94	2,691 65				561,449 00	89 55	1,401 98	45,754 51	
Massachusetts	433,599 94	2,691 65				561,449 00	89 55	1,401 98	45,754 51	
Michigan	433,599 94	2,691 65				561,449 00	89 55	1,401 98	45,754 51	
Minnesota	433,599 94	2,691 65				561,449 00	89 55	1,401 98	45,754 51	
Mississippi	433,599 94	2,691 65				561,449 00	89 55	1,401 98	45,754 51	
Missouri	433,599 94	2,691 65				561,449 00	89 55	1,401 98	45,754 51	
Montana	433,599 94	2,691 65				561,449 00	89 55	1,401 98	45,754 51	
Nebraska	433,599 94	2,691 65				561,449 00	89 55	1,401 98	45,754 51	
Nevada	433,599 94	2,691 65				561,449 00	89 55	1,401 98	45,754 51	
New Hampshire	433,599 94	2,691 65				561,449 00	89 55	1,401 98	45,754 51	
New Jersey	433,599 94	2,691 65				561,449 00	89 55	1,401 98	45,754 51	
New Mexico	433,599 94	2,691 65				561,449 00	89 55	1,401 98	45,754 51	
New York	433,599 94	2,691 65				561,449 00	89 55	1,401 98	45,754 51	
North Carolina	433,599 94	2,691 65				561,449 00	89 55	1,401 98	45,754 51	
Ohio	433,599 94	2,691 65				561,449 00	89 55	1,401 98	45,754 51	
Oklahoma	433,599 94	2,691 65				561,449 00	89 55	1,401 98	45,754 51	
Oregon	433,599 94	2,691 65				561,449 00	89 55	1,401 98	45,754 51	
Pennsylvania	433,599 94	2,691 65				561,449 00	89 55	1,401 98	45,754 51	
Rhode Island	433,599 94	2,691 65				561,449 00	89 55	1,401 98	45,754 51	
South Carolina	433,599 94	2,691 65				561,449 00	89 55	1,401 98	45,754 51	
South Dakota	433,599 94	2,691 65				561,449 00	89 55	1,401 98	45,754 51	
Tennessee	433,599 94	2,691 65				561,449 00	89 55	1,401 98	45,754 51	
Texas	433,599 94	2,691 65				561,449 00	89 55	1,401 98	45,754 51	
Vermont	433,599 94	2,691 65				561,449 00	89 55	1,401 98	45,754 51	
Virginia	433,599 94	2,691 65				561,449 00	89 55	1,401 98	45,754 51	
Washington	433,599 94	2,691 65				561,449 00	89 55	1,401 98	45,754 51	
West Virginia	433,599 94	2,691 65				561,449 00	89 55	1,401 98	45,754 51	
Wisconsin	433,599 94	2,691 65				561,449 00	89 55	1,401 98	45,754 51	
Wyoming	433,599 94	2,691 65				561,449 00	89 55	1,401 98	45,754 51	

## Statement showing the transactions of the money-order office, &amp;c.—Continued.

States and Territories.	Amount of orders paid.	Amount of orders re- paid.	Transferred to postage fund.	Transferred to General's money-order account.	Transferred to Swiss fund.	Deposited.	Expenses.	Commissions and clerk hire.	Balance due the United States.	Miscellaneous items.
Washington Territory.....	\$58,146 61	\$598 75	.....	.....	.....	\$91,900 00	\$4 75	\$406 78	\$2,687 09	.....
Wyoming Territory.....	8,433 01	318 35	.....	.....	.....	33,825 66	4 88	93 75	4,453 64	.....
Arizona Territory.....	1,906 25	1,048 45	\$249 26	.....	.....	57,915 00	.....	113 23	4,466 19	.....
Wisconsin.....	1,880,337 38	16,199 37	693 26	.....	.....	2,073,101 41	505 90	8,261 88	51,425 58	\$47 19
Virginia.....	460,969 04	4,463 19	50 00	.....	.....	977,668 52	11 43	2,866 03	14,196 02	.....
Texas.....	184,550 87	4,898 47	15 63	.....	.....	453,526 62	775 80	1,436 19	34,115 87	41 07
Minnesota.....	607,404 14	6,130 23	1,680 38	.....	.....	687,013 00	9 15	3,403 53	15,475 93	.....
Indiana.....	1,342,037 05	16,468 00	1,947 73	.....	.....	1,453,488 94	233 53	8,073 18	37,170 25	168 35
Kansas.....	950,531 00	10,093 43	3,665 24	.....	.....	1,047,630 19	565 75	5,038 61	22,382 92	571 39
South Carolina.....	222,940 17	1,643 70	3 47	.....	.....	1,466,004 67	491 75	1,339 20	9,510 25	.....
Total.....	41,705,687 03	381,669 26	324,268 19	\$90,000 00	6,054 16	35,254,837 43	16,606 04	177,738 92	970,978 95	2,583 31

J. J. MARTIN, Auditor.

OFFICE OF THE AUDITOR OF THE TREASURY  
FOR THE POST-OFFICE DEPARTMENT, October 17, 1871.

## REPORT OF THE POSTMASTER GENERAL

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*Table showing the increase and decrease of post offices in the several States and Territories; also the number of post offices at which appointments are made by the President and by the Postmaster General, for the year ended June 30, 1871.*

States and Territories.	Whole number of post offices in the United States, June 30, 1870.	Whole number of post offices in the United States, June 30, 1871.	Increase.	Decrease.	Number of postmasters appointed by the President, June 30, 1870.	Number of postmasters appointed by the President, June 30, 1871.	Increase.	Decrease.	Number of postmasters appointed by the Postmaster General, June 30, 1870.	Number of postmasters appointed by the Postmaster General, June 30, 1871.	Increase.	Decrease.
Alabama	543	563	20		10	12	2		533	551	18	
Alaska	4	4							4	4		
Arizona	21	26	5						21	26	5	
Arkansas	428	506	78		4	5	1		424	501	77	
California	506	576	70		20	19		1	486	557	71	
Colorado	94	110	16		4	6	2		90	104	14	
Connecticut	400	403	3		22	35	3		368	368		
Dakota	41	49	8		1	1			40	48	8	
Delaware	89	96	7		4	4			85	92	7	
District Columbia	5	5			2	2			3	3		
Florida	102	139	37		5	5			117	134	17	
Georgia	480	499	19		13	18	5		467	481	14	
Idaho	25	33	8		2	2			23	31	8	
Illinois	1,610	1,674	64		99	108	9		1,511	1,566	55	
Indiana	1,335	1,370	35		46	42			1,289	1,323	34	
Iowa	1,138	1,240	102		46	53	7		1,092	1,187	95	
Kansas	560	657	97		18	21	3		492	636	134	
Kentucky	905	924	19		22	22			893	909	19	
Louisiana	505	531	26		6	6			499	525	26	
Maine	815	814		1	24	23		1	791	791		
Maryland	515	537	22		9	9			508	528	20	
Massachusetts	626	694	68		76	81	5		610	613	3	
Michigan	1,006	1,031	25		54	55	1		958	976	18	
Minnesota	625	672	47		15	18	3		610	654	44	
Mississippi	340	407	67		15	16	1		325	391	66	
Missouri	1,206	1,332	126		33	35	2		1,173	1,297	124	
Montana	68	76	8		2	3	1		66	73	7	
Nebraska	214	271	57		6	6			205	265	60	
Nevada	59	58		1	6	6			53	52		1
New Hampshire	406	410	4		16	19	3		390	391	1	
New Jersey	540	564	24		33	37	4		507	527	20	
New Mexico	40	46	6		2	2			38	44	6	
New York	2,442	2,690	248		134	146	12		2,308	2,544	236	
North Carolina	153	177	24		11	11			142	166	24	
Ohio	2,032	2,054	22		86	87	1		1,946	1,967	21	
Oregon	157	175	18		3	4	1		154	173	19	
Pennsylvania	2,442	2,803	361		101	104	3		2,341	2,789	448	
Rhode Island	99	100	1		9	10	1		89	90	1	
South Carolina	396	336		60	7	7			319	328	9	
Tennessee	788	874	86		14	14			774	860	86	
Texas	521	506		15	19	1			503	577	74	
Utah	130	136	6		1	3	2		119	123	4	
Vermont	457	467	10		17	17			440	449	9	
Virginia	1,635	1,115		520	19	20	1		1,016	1,085	79	
Washington	77	92	15		1	2	1		76	90	14	
West Virginia	589	614	26		5	5			563	608	46	
Wisconsin	1,058	1,085	27		39	43	4		1,019	1,042	23	
Wyoming	27	24		3	3	3			24	21		3
Total	28,492	30,045	1,558	5	1,093	1,172	82	3	27,399	28,873	1,478	4

REPORT  
OF  
THE COMMISSIONER OF AGRICULTURE.

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DEPARTMENT OF AGRICULTURE,  
*Washington, D. C., November 15, 1871.*

SIR: In accordance with the requirement of the act of Congress establishing the Department of Agriculture, I have the honor to submit my first annual report.

There is scarcely a nation upon earth whose people have not recently been startled into action to promote that great interest in which more than one-half the world is actually employed and upon the success of which the other portion is dependent. The segregated character of the rural population has been such as to forbid that concentration of ideas and consultation of views which are so common to all other professions and occupations. But recently, through the instrumentality of agricultural journals and the establishment of agricultural societies and colleges, farmers have been brought to discover that there is work for them to do outside of the precincts of the farm. They seem to have been startled into a determined purpose to take their place in the race of the world's progress, and to assert for themselves a position which will enable them to keep pace with all others whose goal is success in life.

It is the purpose of this Department to encourage and aid this new spirit of improvement, having due regard to "the general designs and duties" imposed by the act of Congress establishing it, which are, "to acquire and to diffuse among the people of the United States useful information on subjects connected with agriculture in the most general and comprehensive sense of that word, and to procure, propagate, and distribute among the people new and valuable seeds and plants." No language could be more comprehensive to express the power of this Department, or to enlarge the field of usefulness over which its influence may be extended; but it is this almost undefined power, and the vast expanse of this field, that render the task difficult to determine what shall be done to promote the great agricultural interests of the country. If a power thus concentrated, with agencies in every county of every State, and facilities for correspondence with all the countries of the world, should not be able to collect knowledge essential to the interests of the people, and seeds and products for distribution which are new and valuable, the failure would be traceable to its own inefficiency, and not to its want of means to do good.

There is, perhaps, no occupation in life which so greatly needs the fostering care of the Government as that of farming. There is no principle of political economy, no question of public policy, no consideration of statistical facts, no new development of scientific knowledge, which does not come home to be measured in its influence upon the results of the farm. This Department, as I view it, has been established to care for these interests, and it invokes our anxious study to know how this shall be best done. My experience in observing the workings of the Department has not been long enough to enable me either to pronounce upon its excellence or to hastily dictate points of improvement, but time and zeal in the effort to give efficiency to its work may enable me to extend its usefulness.

It will be remembered that, by the act of the 2d of July, 1862, Congress donated to the States public lands to "provide colleges for the benefit of agriculture and the mechanic arts." This was a new and important era, and may be said to mark the beginning of scientific knowledge as it pertains to agriculture. It must be conceded that the literary institutions of the country educate boys to a state of total unfitness for the occupations of the farm. The father finds his boy, after his return from an absence of a single year, to have had his thoughts and views centered upon an outside world, and when he has graduated and returns after an absence of four years, he gazes around to conclude that the farm is no place for him; his father and mother and brothers and sisters are no companions for him; his thoughts and theirs have been pursuing different paths; all congeniality of feeling is lost and gone, and he is driven to the nearest county town to prepare himself to make a poor figure in professional life, and perchance to be led into the haunts of intemperance and vice, realizing for his anxious parents not only the loss of the hardly-earned expenses of his education, but the loss of the son himself. But the boy whose acquaintance with natural science and modern languages is accompanied by the study and observation of how plants live and feed and die; how implements are formed, and how their mechanical structure and shape are adapted to the work they do; how the earth itself lives and breathes and dies; and who is accustomed to study and ponder these things as he learns the practical operations of the work itself, returns to his father's home upon the farm, proud of his father's occupation, and happy in the associations of his family and friends; and far more so because of the light which he may shed around him, the position which his education will give him among his fellows, and the success which will be sure to characterize his after life. I speak in no disparagement of, and with no desire to make unfavorable impressions in regard to universities, colleges, and schools, in which youth are trained for professional life, but I claim that the agriculturists of the country shall have a place where their youth may be imbued with the light of science, and thus fitted for agricultural life.

The wisdom of Congress having provided for the endowment of an

agricultural college in every State, these institutions are about to perform a most important part in the destinies of the country. They are yet in their infancy; professors and teachers are themselves yet untaught; agricultural education in this land is a new idea which has but now struck the public mind and is yet to be matured, and a curriculum established which shall have for its object the education of youth in the science and art of cultivating the soil. If these institutions will but confer together, and adopt such principles of action as shall be common to them all, and not inconsistent with the habits of the people in their several localities; establish subjects of study and rules of discipline and graduation; and, especially, if they will recognize and act upon the fact that this Department and they are engaged in the prosecution of a common cause, and that the Department may be made the nucleus around which may be collected the knowledge of inventions, statistics and rare facts, new and improved seeds and plants, to be disseminated, distributed, and experimented upon by the instrumentality of agricultural colleges, the farmer will be benefited to a degree which will be felt throughout every vein and artery of our common country. But, to attain this object, agricultural colleges should be distinctive in their character, and should be made to require compulsory labor of at least twelve hours a week from each of their pupils, thus training their tastes and habits, and inuring them to the daily occupation of a farmer's life, and thus, also, answering the objections often made to agricultural colleges, that their graduates at last choose the business of professional life.

An intimate relation between this Department and the agricultural colleges of the country would produce the most profitable information. If the result of their experiments in crops, the value of fertilizers, the nutritive value of various kinds of food, and the mode of planting, cultivating, harvesting, and storing were all concentrated at this Department, and analyzed and published, what a fund of knowledge would be thus collected and disseminated among the people, and how much more likely would that class who are to be benefited by this knowledge be reached through the instrumentality of these institutions than they now are by the course pursued. I do not profess to have matured the subject, and now only introduce it that it may command the consideration of the minds of men who know and feel how important it is that the agricultural improvements of the country should keep pace with the world's progress in all else.

It must be conceded that the course of agriculture in the Southern States has not been conducted with that care, skill, and regard for ultimate results which have characterized the operations of farmers in other States. While their lands are continuously devoted to cotton and tobacco until they have arrived at a state of exhaustion, those of the North are continually improving by rotation of crops, which is absolutely essential to the life of the soil itself, and without which farming



and planting had better be abandoned. These impressions have induced me to turn my attention to these States to seek some mode by which the influence of this Department may be directed to benefit them; to find out whether their implements, and especially their seeds, may not be greatly improved; and how, in the distribution of seeds and plants, we may best reach those to whom they may be profitably sent.

The agriculture of the Southern States suffers greatly in its interests for want of grasses, in the use of which its productions would be greatly increased, by rendering a rotation of crops necessary. It will be an effort of this Department to introduce this idea, as well as the seeds by which it may be carried out. Clover, with its deep roots, and rye-grass, a strong grower, will well endure the hot sun of the South; and, if preceded by an application of lime, they are sure to grow luxuriantly.

The report of the superintendent of the seed division, and our correspondence with practical farmers, strongly impress my mind with the immense benefit which the distribution of seeds confers upon the country. I do not hesitate to assert that the increased production of wheat, oats, and grasses, by reason of the distribution of new and improved seeds, pays more than ten times the whole amount expended by the Government in this Department, and such is the appreciation of this by the farmers of the country that the demands upon us are daily increasing to a degree beyond our ability to supply. It is very desirable that the efforts of the Department should be especially directed to obtain the most approved cereals, grasses, and plants which the world affords, that they may be put into the hands of our enterprising people. Jute, ramie, and many other exotics may be grown here as well as in any part of the world, and they give great promise of adding very much to our agricultural productions and profits. But in the distribution of seeds I am satisfied that the mode heretofore pursued is erroneous. The quantity sent is entirely too small for even an experiment. A pint or a quart of wheat, oats, or other cereal, cannot be successfully grown, and such experiments almost uniformly fail because the quantity is too small. I need not here discuss the reasons for this, but the result is manifest to those who have tried the experiment. It would be far better to put a half or whole bushel of seed into the hands of one conscientious and careful person than to divide the same quantity among ten or twenty.

I regard, also, the mode of distribution of our annual report as very objectionable. Indeed, in my judgment, it should not be published at all, but should be entirely superseded by the monthly reports which it is now the practice of the Department to issue. These may contain all the information that should emanate from the Department during the year, and the last one, containing the Commissioner's report, should be a condensed summary of the operations of the year. But if it be the pleasure of Congress to continue the annual publication, I suggest that a much smaller number than has been customary be delivered for

gratuitous distribution, and that the greater part of the edition be deposited with the Public Printer, to be sent to all persons who would order the books and pay their first cost and postage for delivery. This, I am advised, would be 66½ cents a volume, making an allowance of 10 per cent. for the expense of wrapping and posting. The daily applications for this book, which the Department has not, convince me that thousands would gladly pay so small a sum to obtain that which they so much desire to have.

The annual report for the year 1870 has been greatly delayed by an effort to obtain statistical facts which were deemed important; but there is no reason why this publication, if it is expedient to make it at all, should not be issued as early as the month of March in each year. It will not be delayed again.

I have been so short a time in the Department that I have not yet discovered all its results nor all its powers of usefulness, and especially have I not yet been able to devise the ways and means by which these powers may be most profitably exercised for the public good. But if a natural fondness for agriculture, and a zealous interest in its success, shall enable me to give tone and character to the Department, it will not suffer in my hands. I am the more satisfied of this because I am surrounded by men of the very highest character and attainments in the several divisions to which they belong. Hence, I am never at a loss for an intelligent and satisfactory answer to any inquiry made of the Department.

#### DIVISION OF HORTICULTURE.

The laying out of the grounds of the Department according to the original design is progressing as rapidly as means will allow. The classified arrangement of trees in the arboretum is also very far advanced toward completion. This part of the improvement promises to be of much interest, and will, no doubt, soon be followed by the formation of similarly arranged collections in public parks, and in the grounds of public institutions, colleges, and schools.

In the exotic department a very large collection of economic and useful plants is under cultivation, and valuable accessions are constantly being received, either by purchase or through exchanges with foreign governments. It is proposed to encourage the formation of similar interesting collections in connection with the agricultural colleges, several of which have already availed themselves of the assistance of the Department in establishing conservatories, where the principal representative, medical, oil-producing, and other plants that furnish valuable commercial products may be seen and studied.

One of the most promising of fiber plants now being extensively propagated is the so-called New Zealand flax, (*Phormium tenax*.) This plant possesses a strong fiber, well fitted for cordage and similar purposes. Whether this fiber can be successfully separated from the leaves will be a question for chemical determination. The plant is adapted to cultiva-

tion in all the Southern States, and flourishes in undrained, swampy, and low lands which are unfitted for cotton or corn crops.

#### STATISTICAL DIVISION.

The operations of the statistical division, including the editing and issue of all the publications of the Department, have been conducted with industry and intelligence, and are becoming more systematic and comprehensive, embracing wider areas and a broader range of information. No effort will be spared to insure accuracy and completeness in this important branch of Department services.

One of the most important items of special work now engaging the attention of this division is the collection of facts illustrating the agricultural status of the Rocky Mountains and the Pacific Slope, showing the progress of settlement and colonization, the yield and quality of production, the peculiarities and profit of agricultural labor, and the wants and capabilities of that great continental area. I propose to accomplish what may be done this year, with means and facilities at command, at a beginning of such a statistical and agricultural survey; and suggest that, if it be the pleasure of Congress to make a small special appropriation for the continuance of the work in the coming year, the country would be greatly benefited.

#### CHEMICAL DIVISION.

Two extensive investigations in the chemical division were commenced early in the year. One of these, the analysis of several hundred specimens of cereals, carefully selected from the whole production of the country, and accompanied by full information in regard to the methods and conditions of cultivation, it is hoped will prove of general value and interest. The examination of the leaf, stem, and fruit of the grapevine, at every week of its growth, has also been undertaken, and is nearly completed. By this work it is expected that new analogies in animal and vegetable physiology will be established, and information gained which bears directly upon the diseases of the vine. Several hundred determinations of the most accurate sort are required, and the time of one assistant is entirely occupied by them.

To enable the chemist to devote himself to those important subjects in agricultural science which await and demand chemical research, I am strongly of the opinion that the public privilege should be restricted to the employment of the laboratory for such purposes only as relate to agriculture. It is evident that if the laboratory were to continue to be held subject to all the miscellaneous demands which have heretofore been made upon it, not only would original investigation be prevented, but an increase of force would be required. The law at present provides only for the employment of a chemist and an assistant.

The apparatus and fixtures of the laboratory have received a few additions, and, with the exception of occasional special needs in original research, may now be considered to be complete.

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## ENTOMOLOGICAL DIVISION AND MUSEUM.

During the last year the correspondence of the entomological division has largely increased, letters having been received and answered concerning injurious insects, birds, quadrupeds, and other branches of natural history, and fruits, fibers, and such subjects as relate to the museum. Investigations have been made into the habits of insects in respect to their food, transformations, &c., and into the best remedies now used to destroy those that are particularly injurious to the farmer. Full experiments have been made in rearing the silk-worm (*Bombyx mori*) on the leaves of the Osage orange, (*Maclura aurantiaca*.) The worms fed greedily, were perfectly healthy, and spun large-sized cocoons of very fair silk.

Cases are much needed for the special reception of the valuable and growing collection of insects now in boxes, and accessible only to entomologists. When such cases are provided, the entire collection will be arranged and labeled, so that the beneficial and the injurious species may be pointed out at a glance. A collection has been commenced with the design of showing the nature of the injuries by insects upon various substances, together with the economic products made by them, as cochineal, gums, &c., and their nests and cocoons. Such a collection is of special value in a cabinet of entomology, as the farmer or fruit-grower can at once identify any insect by comparison of the injury caused by it with the specimen in the cabinet.

During the year large collections of fruits and vegetables have been received from many localities. All these have been modeled and properly labeled and placed in the museum, together with a fine collection of tropical fruits from South America, done in *papier-maché*. Many other valuable additions have been made to the museum during the year, prominent among which may be mentioned the fine collection of fibers made by Dr. H. Perrine, in Florida, several years ago, and presented by the Smithsonian Institution, and a similar collection made by the botanist of the Department while in Santo Domingo; collections of insects from the Smithsonian Institution and from geological surveys; a collection of foreign game-birds by the curator; Chinese and Japanese papers, cocoons, silk, &c.; and contributions in other departments.

## THE LIBRARY.

The number of volumes now in the library is 6,012, of which there have been added during the year 1,064, inclusive of 500 volumes received from the Secretary of the Interior. About one-half of the whole number added relate to agriculture and the allied sciences of pomology, entomology, agricultural geology, microscopy, and natural history, all valuable for reference on questions continually discussed in the correspondence and reports of the Department. Those donated by the Secretary of the Interior are composed principally of public documents.

The library continues to receive the journals and reports of the lead

ing agricultural and scientific associations of the world, many of which are in exchange for the annual and monthly reports of the Department. Some of the French journals have been suspended by the war with Germany, but doubtless their publication will soon be resumed and the exchange continued. All of these works are carefully preserved, and in themselves form a useful collection for reference in the scientific and statistical investigations of the day. Many of them are probably not accessible in any other library in the country. They furnish the results of the very latest investigations in entomology, botany, agricultural geology, and microscopy, as well as experiments in agriculture, which could be abridged and published in the monthly reports of the Department before they are reproduced by the agricultural journals of the country.

Many of the sets of State agricultural reports and periodicals being incomplete, steps have been taken to supply the volumes and numbers that were missing. This has been accomplished in nearly every instance without expense to the Department. The library now contains sets, generally complete, of the transactions of the boards of agriculture of all the leading States of the Union for the last twenty years.

There are now nearly 500 volumes of miscellaneous agricultural publications at the Government bindery for binding or rebinding.

A catalogue of the library is being prepared, in which will be classified the most important subjects, so that persons wishing to investigate any particular topic can see at a glance the titles of all the works relating to it.

#### EXCHANGE OF SEEDS.

Since the plan of international exchanges of seeds and plants was inaugurated by my predecessor, the Department has continued the system, having found the results to be highly advantageous in adding to our collection seeds of many valuable species of useful and ornamental plants that could not be readily procured through the ordinary channels of trade, except at a very heavy outlay. Since the last report referring to these exchanges, the Department has sent two collections of tree seeds, one containing ninety-five species, and the other one hundred and sixteen, to the Royal Botanic Gardens, at Kew, England; Royal Botanic Gardens, at Edinburgh, Scotland; Royal Botanic Gardens, at Glasnevin, and Royal Dublin Society, at Dublin, Ireland; Horticultural Society of Bremen, North German Union; Botanic Gardens, at Melbourne, Australia; Royal Minister of Agriculture, at Berlin; government of Switzerland, through Mr. John Hitz, consul general; Imperial and Royal Ministers of Agricultural Affairs, Austria and Hungary; University of Christiania, Norway; Royal Gardens, Portugal; Imperial Botanic Gardens, at St. Petersburg, Russia; and the Kingdom of the Netherlands. From many of these correspondents the Department has received some valuable contributions, of which special mention may be

made of those from the Kew Gardens, the Royal Gardens at Melbourne, and the Imperial and Royal Ministers of Agricultural Affairs of Austria and Hungary. Exchanges have also been effected through the courtesy of our ministers and consuls in South America, Europe, Asia, and the Hawaiian Islands, and through these sources some of the most rare and valuable seeds and plants have been received.

During the present year correspondence has been opened with the ministers of agriculture of the South American governments for the purpose of effecting exchanges of the agricultural and other useful products of those countries which are known to be prolific of numerous medicinal and other economic plants. The result of this correspondence has been the receipt of many rare plants, consisting of palms, &c., as also donations of cereals and vegetable-seeds of rare perfection, among which may be mentioned a contribution of cereals from the president of the National Society of Santiago, Peru, embracing some of the finest specimens of wheat I have ever seen, which, with other similar contributions, will be carefully experimented with, for the purpose of testing their adaptability to our soil and climate. These South American correspondents are located in Brazil, Ecuador, Venezuela, Nicaragua, Mexico, Guatemala, and United States of Colombia. Exchanges continuing with the Chinese and Japanese governments, and some valuable contributions have been received, especially from the latter.

An arrangement for exchange has been made with the colonial governments of Jamaica, which will result largely to the advantage of this Department, the colonial secretary having promised a donation of over three thousand plants of the cinchonas, embracing all the valuable varieties. This acquisition will enable the Department, at an early period, to encourage experiments in those sections of the South where there is a reasonable prospect of the successful culture of this invaluable plant, which, in the past, has been exclusively confined to certain localities in South America, but the cultivation of which has recently been commenced by the British government in the East and West Indies at a large outlay.

The international courtesies that are inaugurated and fostered by a system of mutual exchanges of the products of the soil are prolific of most valuable results. Following the successful introduction of our seeds into foreign countries, especially those in which the ruder systems of agriculture prevail, come inquiries regarding the best modes of culture, the introduction of improved machinery for the husbanding and utilizing of crops, and questions of similar import, thus extending the benefits of our improved mechanism and labor-saving farm-implements. While the advantages which must naturally flow from this source redound to the immediate benefit and permanent advancement of the important mechanical interests of this country, improved systems at the same time are introduced into those countries with which we exchange, thereby hastening their development, increasing their productions, and adding to their wealth.



## THE SEED DIVISION.

The following tabular statement shows the quantity and kind of seeds issued from the seed division of this Department from November 1, 1870, to October 31, 1871, inclusive.

Cereals, seeds, and textiles.	TO WHOM SENT, AND NUMBER OF PACKAGES.						Total.
	Senators and mem- bers of Congress.	Agricultural socie- ties.	Correspondents.	Meteorological ob- servers.	Miscellaneous.	Foreign countries.	
<b>CEREALS:</b>							
Vegetables, 113 varieties.....	108, 457	74, 095	96, 732	8, 680	76, 507	1, 429	365, 933
Flowers, 54 varieties.....	79, 886	2, 778	30, 360	6, 340	63, 921	74	153, 259
Wheat, 6 varieties.....	12, 616	4, 756	5, 644		3, 359	75	26, 450
Rye, 2 varieties.....	752	4	2, 860		313		3, 989
Oats, 4 varieties.....	9, 943	8, 112	2, 211		2, 744	50	23, 060
Barley, 4 varieties.....	1, 925	5, 518	16		402		7, 961
<b>OTHER SEEDS:</b>							
Tobacco, 5 varieties.....	16, 445	30			2, 070	25	18, 560
Sorghum, 3 varieties.....	664	76			138		878
Clover, 3 varieties.....	609	335	2		590	8	1, 804
Kyo-grass, 2 varieties.....	64				73	48	185
Osage orange, 1 variety.....					28		28
Opium poppy, 2 varieties.....	6, 480				462		6, 942
Sugar-beet, 3 varieties.....	76	924			73		1, 073
Herbs, 9 varieties.....	666				168	162	996
Mangel-wurzel, 3 varieties.....	1, 492	1, 532			103		3, 127
Madder, 1 variety.....					79		79
<b>TEXTILES:</b>							
Hemp, 2 varieties.....	42				83		125
Cotton, 3 varieties.....	20		804		376		1, 200
Ramie, 1 variety.....					145		145
Jute, 2 varieties.....					168		168
Pea-nuts, 1 variety.....						8	8
Tree seeds, 116 varieties.....						1, 571	1, 571
Total.....	340, 427	98, 153	138, 529	15, 020	151, 742	3, 450	647, 391

## AGRICULTURAL PRODUCTIONS OF THE YEAR.

In its meteorological aspects the season has been marked by local droughts, high winds, and floods. In the later months of summer continued dry weather became rather general than local throughout a large portion of the Ohio Valley, the Missouri Valley, and the Southwestern States; and in the Rocky Mountain sections drought was more severe than usual. It is to be feared that the destruction of forests by devastating fires, and in supplying lumber and timber, will render drought, winds, and floods more frequent and severe. Heavy frosts, which proved very injurious to winter grain, were general throughout the West from April 21 to 23; and autumn frosts, which arrested the growth and maturity of crops, occurred generally from 21st to 30th of September. The month of September was cooler than the corresponding month for many

years, but the high temperature of the preceding months, and especially of August, had advanced corn and other crops beyond the point of material damage from frosts.

The injury resulting from these unfavorable meteorological conditions is mainly seen in the poorer soils, or in those in inferior mechanical condition—those in the highest cultivation and of the richest character having a power of resistance and a recuperative energy which insure good crops under circumstances apparently adverse. The records of the Department, verifying the observation of all intelligent cultivators, attest the value of perfect drainage and good culture in warding off dangers from drought and excessive moisture. Such has been the experience of the present year, which promises a moderate abundance for the supply of man and his dependent creatures of the farm. The area planted with corn was largely increased, and a larger breadth of wheat was sown. While the crop of corn will not equal the great yield of 1870, nor that of wheat the unparalleled crop of 1869, there will be an ample supply of both for the wants of this country, and tens of millions of bushels to supplement the short crops of Europe. While the product of hay is somewhat less than usual, its quality is good, and coarse forage in all sections and winter pasturage in the South and distant West are never-failing resources. Cotton will be gathered in smaller quantity, and sold at a higher price. Other crops, as a whole, promise very nearly average returns, giving moderate rewards to labor and ample supplies for necessary consumption.

#### FINANCIAL.

At the time I assumed the duties of Commissioner, on the 1st day of August last, the appropriations for the fiscal year ending June 30, 1871, were exhausted, except the appropriation for the "purchase and distribution of new and valuable seeds," of which there remained a balance unexpended of \$7,508 96, with unsettled bills for seeds purchased in Europe, under this appropriation, amounting to about \$7,300. Of the appropriations for the current fiscal year, the following statement exhibits the amounts disbursed and the unexpended balances, under their respective heads, on the 1st of August last :

Title of appropriation.	Amount disbursed to July 31, 1871.	Amount unexpended August 1, 1871.
Salaries .....	\$6,207 92	\$68,968 08
Collecting statistics .....	884 50	14,115 50
Purchase and distribution of seeds .....		45,000 00
Experimental garden .....	707 96	9,392 04
Contingent expenses .....	344 90	12,555 10
Furniture, cases, and repairs .....	185 50	4,514 50
Museum .....		2,000 00
Library .....	140 31	1,909 69
Laboratory .....	480 35	2,960 65
Improvement of grounds .....	7,500 00	19,300 00
Total .....	16,451 44	180,618 56

Showing a balance unexpended at that date of \$180,618.56, which, with strict economy, will be sufficient for the successful operations of the Department during the current year.

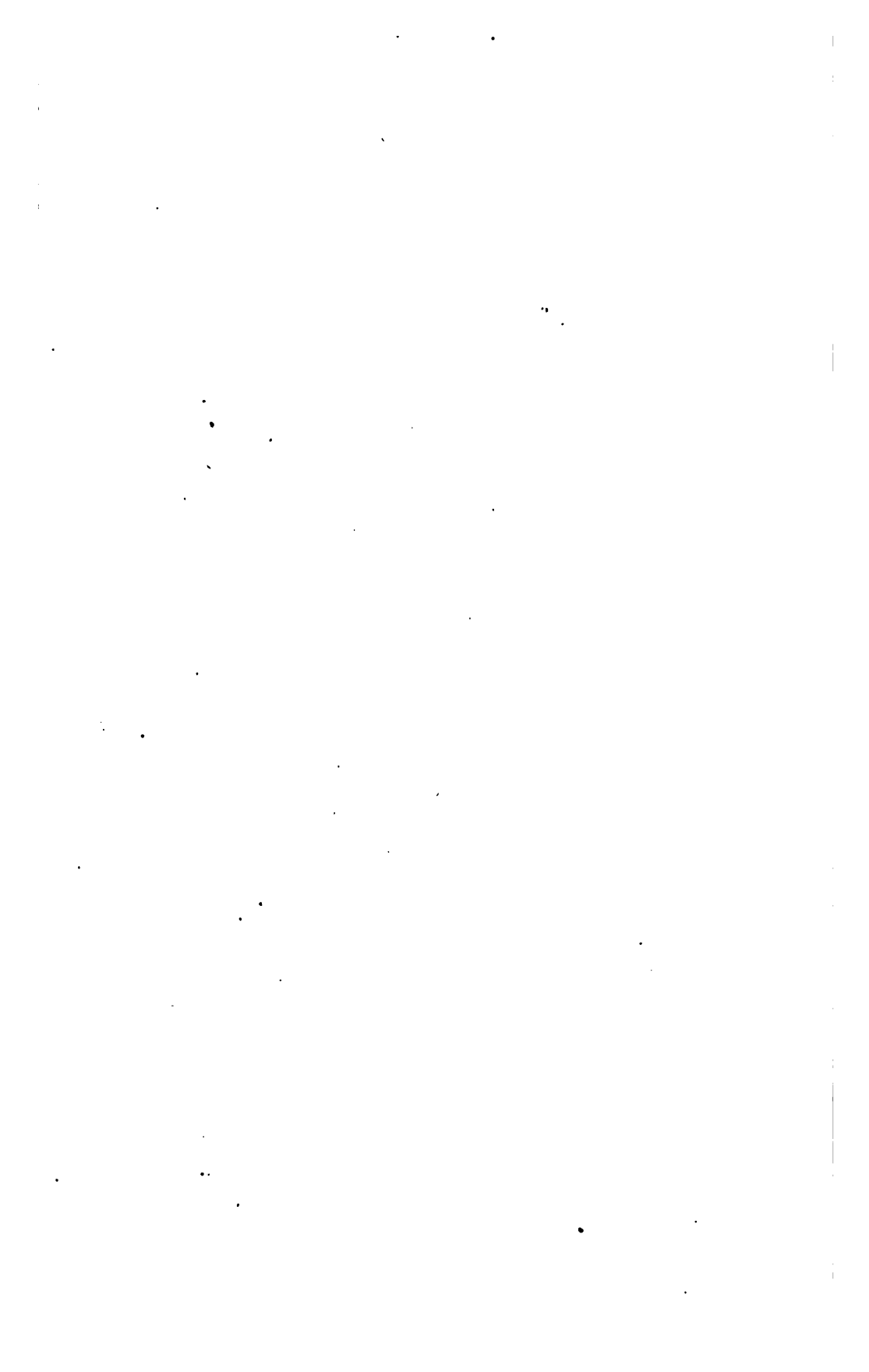
By a late act of Congress the financial operations of the Department for each fiscal year are to be kept entirely separate. I deem it proper, therefore, to defer until the expiration of the present fiscal year a report of these operations during the three months I have had control of the Department, when a complete report will be made.

My estimates for the appropriations necessary for this Department during the fiscal year of 1873 were made and transmitted to the Secretary of the Treasury on the 17th of October. They were based on the appropriations for the present year; reduced in some respects when it could be done without injury to the successful operations of the Department, and slightly increased in other items when the necessities of the case seemed to require it, and in all respects with reference to the most rigid economy consistent with an efficient administration of the legitimate objects of the Department. The aggregate amount estimated is less than the appropriations for the current year.

I have the honor to be, very respectfully, your obedient servant,  
**FREDERICK WATTS,**

*Commissioner of Agriculture.*

**His Excellency U. S. GRANT,**  
*President.*



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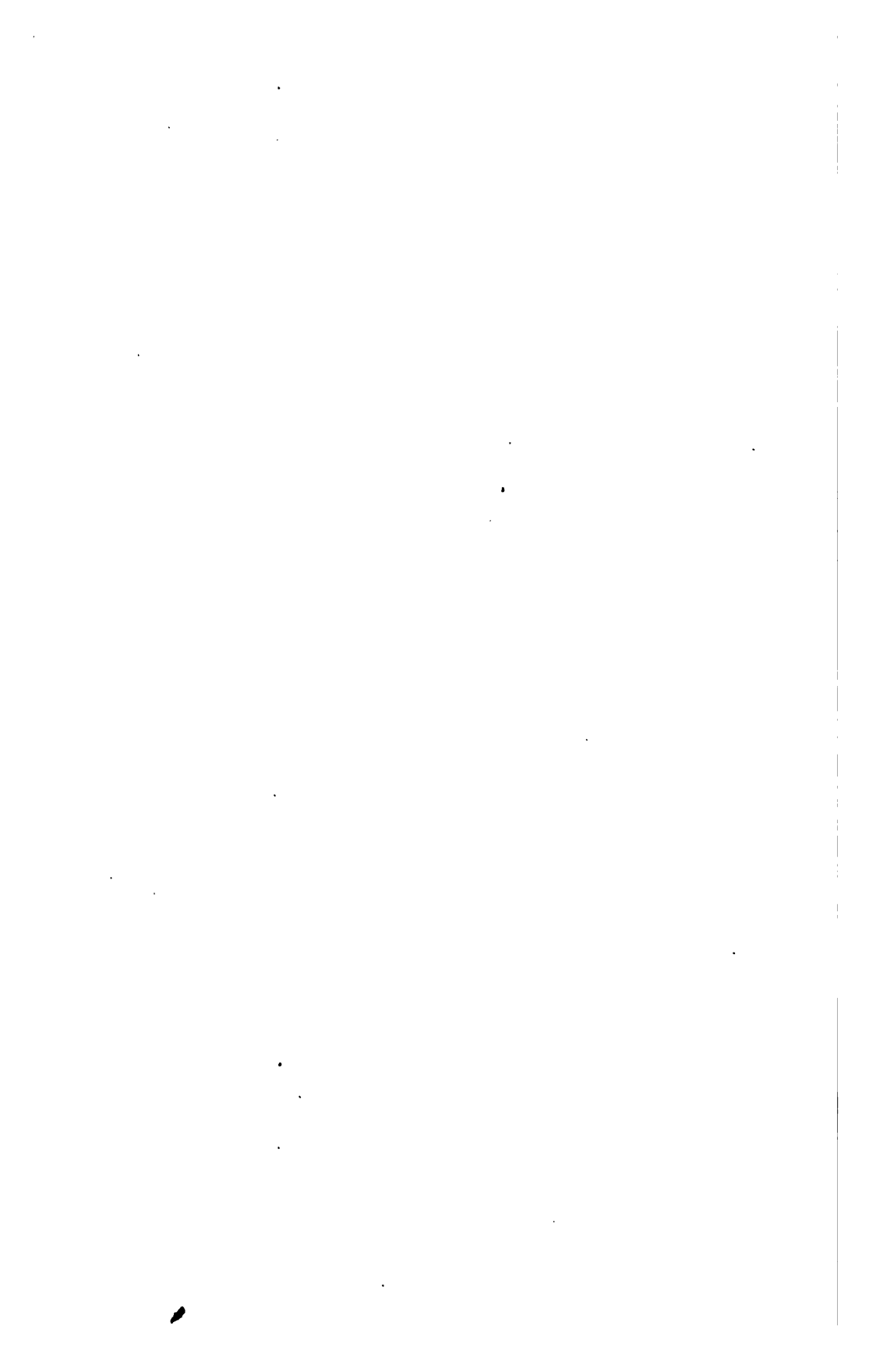
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